MHC-2900/E60X

SERVICE MANUAL

E Model
Australian Model
Tourist Model
MHC-E60X

AEP Model
UK Model
MHC-2900

MHC-2900 and MHC-E60X are composed of following models. As for the service manual, it is issured for each copmponent model, then, please refer to it.

Tuner/Amplifier	STR-H2900
CD Player/Cassette Deck	HTC-H2900
Speaker System	SS-H2900

SPECIFICATIONS

Power requirements	220 – 230V AC, 50/60Hz (AEP, German, Italian, East European, CIS model) 240V AC, 50Hz (UK model) 110 – 120V or 220 – 240V AC, adjustable, 50/60Hz (MHC-E60X)
Power consumption	120watts (MHC-2900) 165watts (MHC-E60X)
Supplied accessories	Remote commander (1) Sony SUM-3 (NS) batteries (2) AM loop antenna (1) FM antenna (1) AC power cord (1) Flat cord (1) Speaker cord (2)

Design and specifications subject to change without notice.

MINI Hi-Fi COMPONENT SYSTEM

SONY®

PARTS LIST (Accessories & Packing Materials)

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Abbreviations
  AUS : Australian
  EA : Saudi Arabia
  EE : East European
  G : German
  IT : Italian
  JE : Tourist
  MY : Malaysia
  MX : Mexican
  SP : Singapore

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Part No.	Description
1-467-697-11	COMMANDER, STANDARD (RM-S29E) (MHC-E60X/2900:CIS)
1-467-698-11	COMMANDER, STANDARD (RM-S29) (MHC-2900:AEP, UK, G, IT, EE)
1-501-369-11	ANTENNA (MHC-2900)
1-501-374-11	ANTENNA, LOOP
1-501-659-11	ANTENNA (FM) (MHC-E60X)
⚠1-556-280-00	CORD, POWER (MHC-E60X:E, JE, MX)
1-557-954-21	CORD, SPEAKER CONNECTION (MHC-E60X)
⚠1-569-007-11	ADAPTER, CONVERSION 2P (MHC-E60X:E, JE, MX)
⚠1-569-008-11	ADAPTER, CONVERSION 2P (MHC-E60X:EA, MY, SP)
⚠1-575-131-11	CORD, POWER (MHC-E60X:EA, MY, SP/2900:AEP, G, IT, EE, CIS)
⚠1-590-866-11	CORD, POWER (MHC-2900:UK)
⚠1-751-015-11	CORD, POWER (MHC-E60X:AUS)
1-765-226-11	CORD (WITH CONNECTOR)
3-707-584-21	COVER, BATTERY (For RM-S29/S29E)
3-758-776-11	MANUALU, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (MHC-2900:AEP, UK)
3-758-776-31	MANUALU, INSTRUCTION (SPANISH) (MHC-E60X:MX)
3-758-776-41	MANUALU, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (MHC-2900:AEP, G, IT)
3-758-776-51	MANUALU, INSTRUCTION (ENGLISH, GERMAN, RUSSIAN, PORTUGUESE) (MHC-2900:EE, CIS)
3-758-776-61	MANUALU, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE) (MHC-E60X:AUS, EA, E, JE, MY, SP)
3-758-776-81	MANUALU, INSTRUCTION (ARABIC) (MHC-E60X:EA)
3-758-776-91	MANUALU, INSTRUCTION (KOREAN, PORTUGUESE) (MHC-E60X:JE)
*4-966-010-01	CUSION (FRONT) (STR-H2900)
*4-966-011-01	CUSION (REAR) (STR-H2900)
*4-966-013-01	CUSION (FRONT) (HTC-H2900:AEP, UK)
*4-966-014-01	CUSION (REAR) (HTC-H2900:AEP, UK)
*4-966-016-01	INDIVIDUAL CARTON (MHC-E60X:EA, E, JE, MX, MY, SP)
*4-966-018-01	INDIVIDUAL CARTON (MHC-E60X:AUS)
*4-966-019-01	INDIVIDUAL CARTON (MHC-2900:AEP, EE, CIS, UK)
*4-966-435-01	CUSION (SS-H2900)

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STR-H2900/H3900

SERVICE MANUAL

- STR-H2900 is the tuner and amplifier section in MHC-2900/E60X.
- STR-H3900 is the tuner and amplifier section in MHC-3900.

Photo: STR-H3900

AEP Model
UK Model
E Model
Australian Model
Tourist Model
STR-H2900

AEP Model
STR-H3900

SPECIFICATIONS

Tuner section
FM stereo, FM/AM superheterodyne tuner

FM tuner section
Tuning range For East European, CIS model
65.0 — 74.0 MHz
87.5 — 108.0 MHz
For other countries models
87.5 — 108.0 MHz
For customers who purchased this unit in JAPAN
78.0 — 108.0 MHz
Antenna terminals
75 ohm unbalanced
Intermediate frequency
10.7 MHz

AM tuner section
Tuning range For Italian model
AM: 522 — 1,611 kHz
For German model
AM: 531 — 1,602 kHz
For AEP, East European, UK, CIS model
MW: 531 — 1,602 kHz
LW: 153 — 279 kHz
For other countries models
MW: 531 — 1,602 kHz (at 9 kHz step)
530 — 1,710 kHz (at 10 kHz step, except for Middle Eastern model)
SW: 5.950 — 17.900 MHz
Antenna AM loop antenna
External antenna terminals
Intermediate frequency
450 kHz

Amplifier section
For STR-H3900
Continuous RMS power output
60 + 60 watts (6 ohms at 1 kHz, DIN)
70 + 70 watts (6 ohms at 1 kHz, 5% THD)
Music power output
130 + 130 watts (6 ohms at 1 kHz, 10% THD)
For AEP, UK, German, East European, CIS model
Continuous RMS power output
40 + 40 watts (6 ohms at 1 kHz, DIN)
45 + 45 watts (6 ohms at 1 kHz, 5% THD)
Peak music power output
110 + 110 watts (6 ohms at 1 kHz, 10% THD)
For E, Saudi Arabia, Australian, Malaysia, Singapore, Mexican, Tourist model
Continuous RMS power output
50 + 50 watts (6 ohms at 1 kHz, 5% THD)
Peak music power output
700 watts (4 speaker driven)
Input
For E, Saudi Arabia, Australian, Malaysia, Singapore, Mexican, Tourist model
MIX MIC (minijack)
sensitivity 1 mV,
impedance 10 kilohms
MD/VIDEO/DAT (phono jacks)
sensitivity 450 mV,
impedance 47 kilohms
For AEP, UK, German, East European, CIS, Italian model
MD/VIDEO/DAT (phono jacks)
sensitivity 450 mV,
impedance 47 kilohms
PHONO (phono jack)
sensitivity 3 mV,
impedance 47 kilohms

Outputs
HEADPHONES (stereo minijack):
accept headphones of 8 ohms or more.
MD/VIDEO/DAT (phono jacks):
voltage 250 mV, Impedance 1 kilohms
Dimensions
Approx. 225 x 195 x 265 mm (w / h / d)
(8 7/8 x 7 3/4 x 10 1/2 inches)
Mass
STR-H2900
Approx. 4.8 kg
(10 lb 9 oz)
STR-H3900
Approx. 5.3 kg
(11 lb 11 oz)

General

Destination	Power requirements	Power consumption
Australian model	220 — 240 V AC, 50 Hz	120 W
AEP, German, Italian, CIS, East European model	220 — 230 V AC, 50/60 Hz	H2900: 120 W H3900: 180 W
UK model	240 V AC, 50 Hz	120 W
E, Saudi Arabia, Malaysia, Singapore, Mexican, Tourist model	110 — 120 V / 220 — 240 V AC, 50/60 Hz Adjustable with the Voltage Selector	140 W

Design and specifications subject to change without notice.

MINI Hi-Fi COMPONENT SYSTEM

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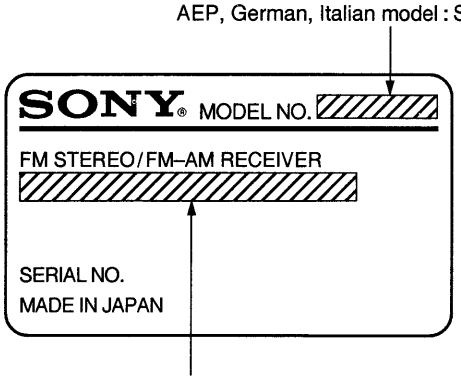
MODEL IDENTIFICATION

— Specification Labels —

AEP, German, Italian, UK, E, Saudi Arabia, Australian,
Malaysia, Singapore, East European, Mexican,
CIS, Tourist model : STR-H3900
AEP, German, Italian model : STR-H2900



AEP, German,
East European, CIS model : AC : 220—230V~50/60Hz
UK, Australian model : AC : 240V~50Hz
Italian model : AC : 220—230V~50Hz
E, Saudi Arabia, Malaysia,
Singapore, Mexican,
Tourist model : AC : 110—120/220—240V~50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1
GENERAL

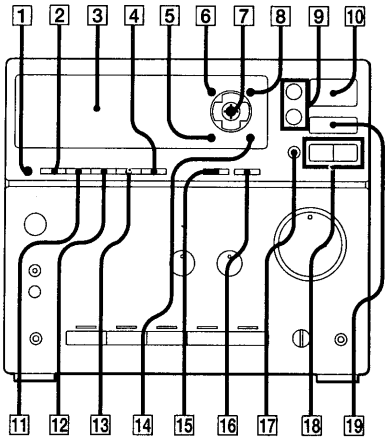
This section is extracted from instruction manual.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

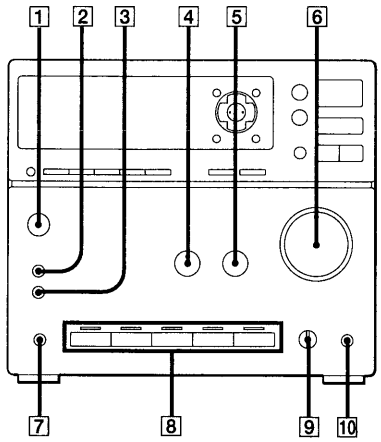
Front Panel

Tuner/Equalizer section



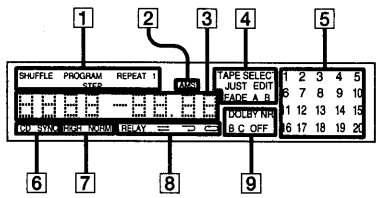
1 CLOCK SET button (6)
2 TIMER SET button (24, 25)
3 Display window (6, 10, 22, 24)
4 SLEEP button* (24)
5 EFFECT button (15, 22)
6 MODE ON button (22)
7 CURSOR CONTROL (22)
8 MODE OFF button (22)
9 TUNER/TIMER (+/–) buttons (6, 10, 24)
10 TUNER/BAND button (10)
11 ONCE button* (24)
12 DAILY button* (24)
13 REC TIMER button* (25)
14 EQ MEMORY button (23)
15 STEREO/MONO button (10)
16 DISPLAY button (20) : Except AEP, German, Italian, UK model
16 RDS DISPLAY button (11) : AEP, German, Italian, UK model
17 MEMORY/NEXT button (6, 11, 24)
18 RDS buttons (11) : AEP, German, Italian, UK model
EON (Enhanced Other Networks) button (12)
PTY (Programme Type) button (13)
19 TUNING MODE button (10)

Amplifier section



1 SYSTEM POWER switch and ON/STANDBY indicator (6)
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
2 KARAOKE PON button* (26)
3 Remote sensor
4 DBS FREQUENCY control (21)
5 DBS LEVEL control (21)
6 VOLUME control (5, 7, 21)
7 HEADPHONES jack (stereo minijack) (21, 27)
8 Function buttons* (20, 26)
AEP, UK, German, East European, CIS, Italian model
TAPE (20)
MD/DAT/VIDEO (27)
CD (16, 26)
TUNER (25)
PHONO (27)
E, Saudi Arabia, Australian, Malaysia, Singapore, Mexican, Tourist model
VIDEO (25)
TAPE (18)
MD/DAT (25)
CD (14, 24)
TUNER (18)
9 MIC LEVEL control (26)
10 MIX MIC jack (minijack) (26, 27)

Display Window



1 CD play mode indications (8)
2 RDS indications (11) : AEP, German, Italian, UK model
3 Counter indication (7, 17)
4 CD edit mode indications (17)
5 Music calendar (7, 17)
6 CD SYNC (synchro) indication (15)
7 Dubbing mode indications (20)
8 Direction mode indications (14)
9 DOLBY NR indications (15)

SECTION 2
ELECTRICAL ADJUSTMENTS

2-1. TEST MODE

1. Checking of the keys, FL tubes and the equalizer and resetting of the memory

The test mode is activated by the following methods. The test mode is reset by pressing the [SYSTEM POWER] key.

(1) Checking of the keys and FL tubes
This mode is actuated by pressing the [KARAOKE PON] key while simultaneously pressing the [TUNING MODE] and [REC TIMER] keys with power on condition.

[All FL tubes light up.]
↓
With a key other than [SYSTEM POWER] key pressed,indication peculiar to each key is displayed and press the key again other than [SYSTEM POWER], FL indicator light up "KEY COUNT=0"and press the key again other than [SYSTEM POWER], FL indicator light up "KEY COUNT=1" and so on.
↓
[Press the SYSTEM POWER key.]

The test is completed.

(2) Checking of the equalizer (keys)
This mode is actuated by pressing the [KARAOKE PON] key while simultaneously pressing the [TUNING MODE] and [DAILY] keys with power on condition.
The indication tube displays the destination and "EQ CHECK" while waiting for keying-in.
You can check the equalizer by pressing the following keys.

[CURSOL CONTROL Δ] : Equalizer indication lights the ALL MAX. position.
[EFFECT] : Equalizer indication lights the ALL FLAT position.
[CURSOL CONTROL ∇] : Equalizer indication lights the ALL MIN. position.

(3) Forced cold start
While pressing the [SYSTEM POWER] key with the power cord disconnected, connect the power cord. Thus, the internal RAM and the non-volatile memory are reset.

Note: Thus, preset data in the memory is erased while returning to the initial state. Before beginning the test, write out preset contents of the memory and, after completion of testing, be sure to set the memory to the state before repairing.

2-2. TUNER SECTION ADJUSTMENTS

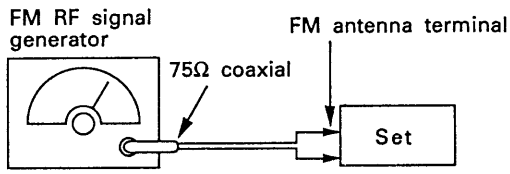
• Abbreviations

EE : East European	JE : Tourist	SP : Singapore
AUS : Australian	G : German	MX : Mexican
EA : Saudi Arabia	IT : Italian	MY : Malaysia

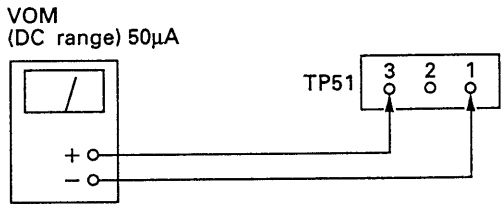
[FM SECTION]

Note : The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement.

Setting :



Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz deviation
Output level : 1mV (60dBμ)



FM NULL ADJUSTMENT

BAND switch : FM

Procedure :

1. Supply a 1mV (60dBμ) 98MHz signal from the antenna terminal.
2. Tune the set to 98MHz.
3. Adjust IFT51 for 0V reading on the VOM.

Adjustment Location : INPUT board.

FM Tuning Level Adjustment

BAND switch: FM

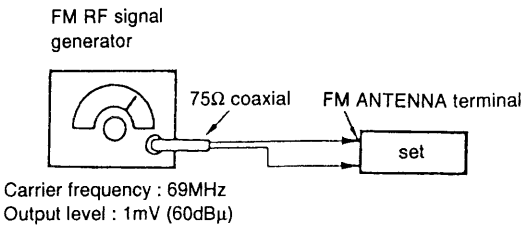
Procedure:

1. Supply a 22.4μV (27dBμ) 98MHz signal from the antenna terminal.
2. Tune the set to 98MHz.
3. Adjust RV52 so that the [TUNED] light up.
4. Confirm that the [TUNED] light off with FM RF SSG output level set at 24dBμ.

Adjustment Location : INPUT board.

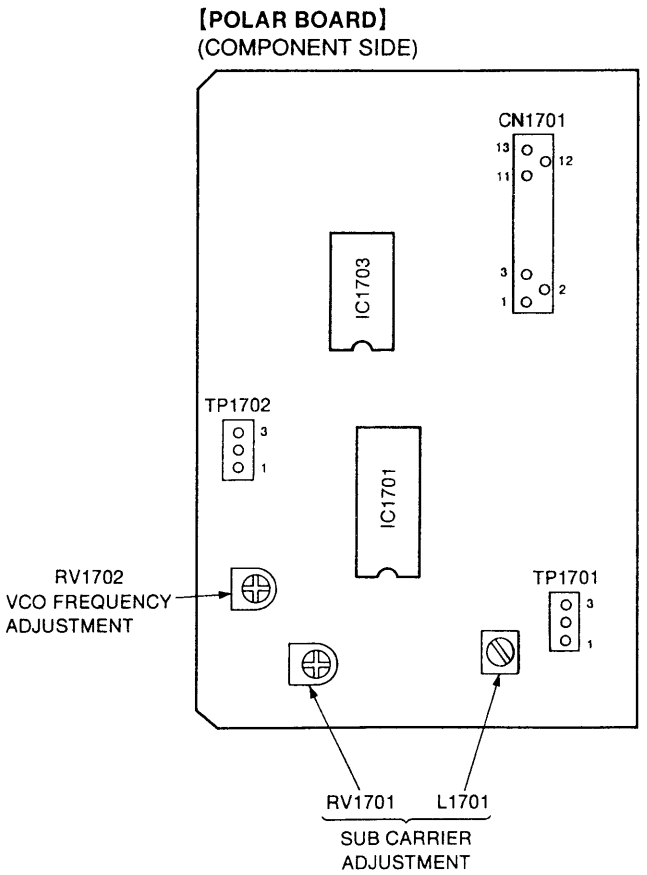
FM POLAR Adjustment (CIS model only)

Setting :
BAND switch : FM



1. Connect the frequency counter to the TP1702 and adjust the RV1702 for a frequency of 31.25kHz ± 50Hz.
2. Connect the VTVM to the TP1701, receive the signal of 69MHz ± 1kHz (1kHz dev.) and adjust the reading of the VTVM to 0dB.
3. Set the modulation frequency of the FM RF signal generator to 31.25kHz (10kHz dev.) and adjust the L1701 so that the reading of the VTVM is 0dB.
4. Adjust the RV1701 so that the reading of the VTVM to 14dB.
5. Check that the separation between Pins 13 and 11 of the CN1701 is more than 18dB.

Adjustment Location : POLAR board

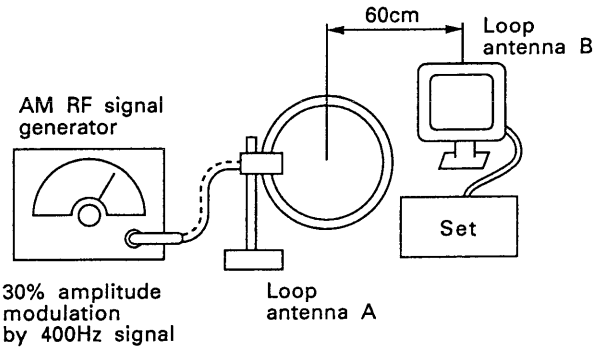


AM SECTION

AM Tuning Level Adjustment

BAND switch : AM

Setting :



Procedure:

1. Set loop antenna A so that the loop antenna B input level becomes 631μV (56dBμ).
2. Tune the set to 999kHz.
   (9k step mode) (10k step mode : 1,000kHz).
3. Adjust the RV51 so that the TUNED light up.
4. Confirm that the TUNED light off with AM RF SG output level set at 53dBμ.

For the AEP, UK, G, IT, EE, and CIS models, check the following.

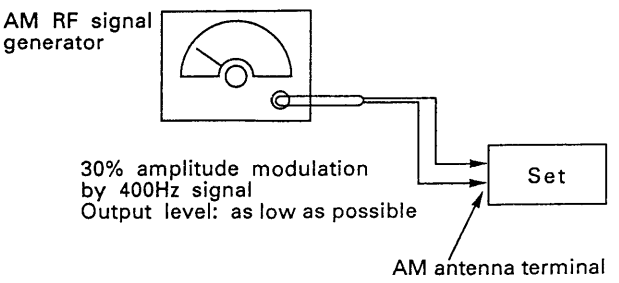
5. Set the BAND switch to LW.
6. Set loop antenna A so that the loop antenna B input level becomes 631μV (56dBμ).
7. Tune the set to 216kHz.
8. Confirm that the TUNED light up.
9. Confirm that the TUNED light off with AM RF SG output level set at 53dBμ.

Adjustment Location : INPUT board.

SW Tracking Adjustment (E, EA, AUS, JE, SP, MX, MY model)

BAND switch : SW

Setting :



Adjust for maximum reading on VTVM.	
17MHz	CV1
7MHz	T1

Adjustment Location : INPUT board.

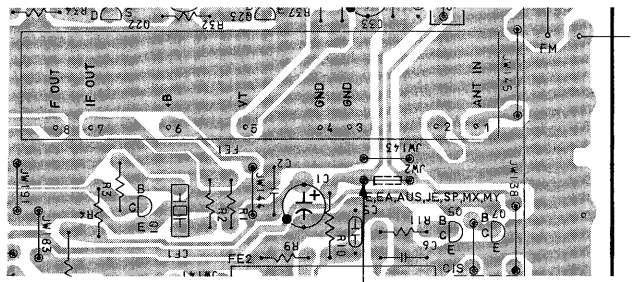
SW OSC Voltage Adjustment
(E, EA, AUS, JE, SP, MX, MY model)

BAND switch: SW

Procedure:

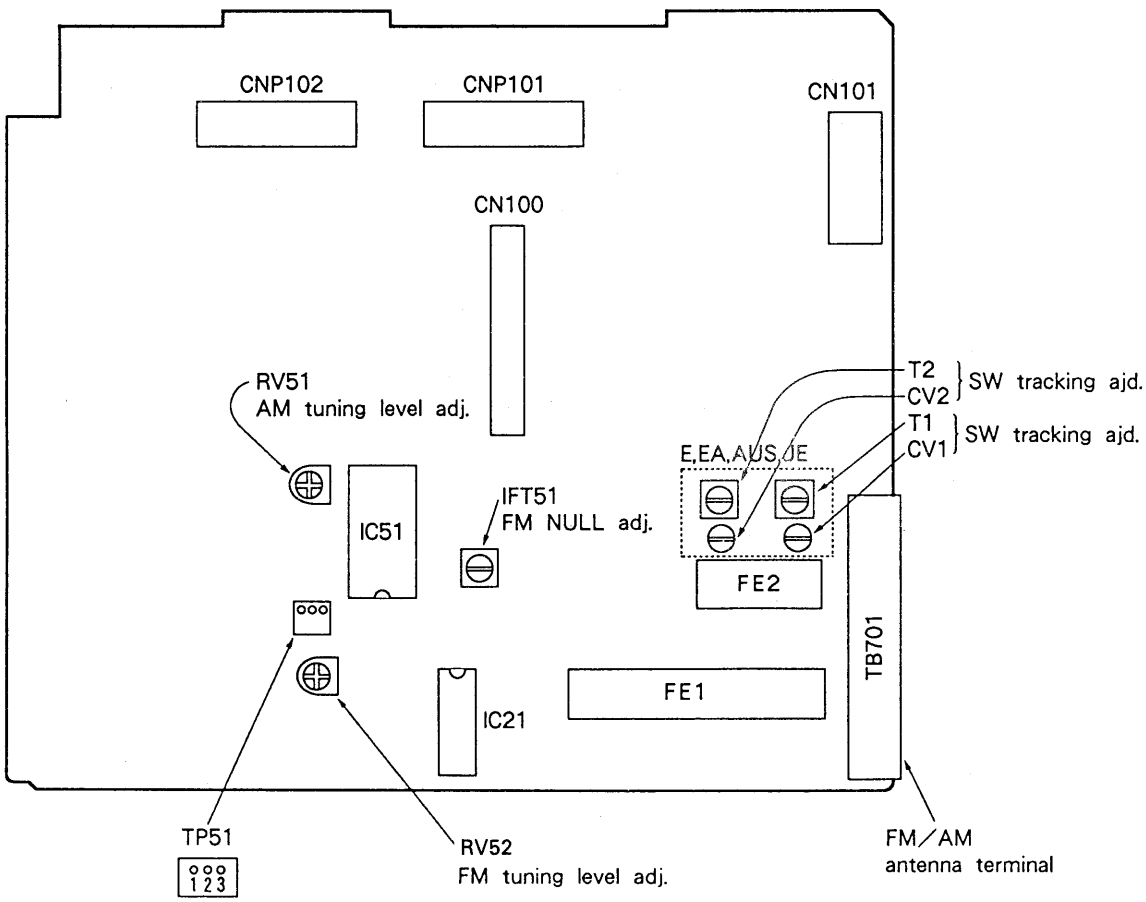
1. Press TUNING (+, –) button for 5.95MHz.
   Adjust T2 for 0.9 – 1.1V VOM reading.
2. Press the button for 17.9MHz.
   Adjust CV2 for 8.3 – 8.7V reading.

[INPUT board] – conductor side –



Adjustment Location : INPUT board.

[INPUT board] – component side –



SECTION 3
DIAGRAMS

3-1. IC PIN FUNCTION

• IC300 System Controller μPD78014BCG-615-AB8

Pin No.	Pin Name	I/O	Description
1	DATA	O	Data output for LED driver (66311)
2	CLOCK	O	Clock output for LED driver (66311)
3	LATCH	O	Latch output for LED driver (66311)
4	OE	O	ENABLE output (M66311)
5	FUNCTION A	O	Function control output
6	FUNCTION B	O	
7	FUNCTION C	O	
8	POWER	O	Power ON/OFF switch control "H": OFF "L": ON
9	VSS	–	GND
10	VOL +	O	Volume up control output "H": Volume up
11	VOL –	O	Volume down control output "H": Volume down
12	AUMUTE	O	Audio mute output "H": Mute off "L": Mute on
13	TUMUTE	O	Tuner mute output "H": Mute off "L": Mute on
14	GEQ. DATA	O	GEQ. Data output
15	ST ON	O	Tuner power ON/OFF output "L": ON "H": OFF
16	GEQ. CLK	O	GEQ. Clock output
17	RDSRST	O	RDS reset output
18	STEREO	I	STEREO signal input
19	SIGNAL	I	TUNED signal input
20	DATA IN	I	Data input (LC7218M, PLL)
21	DATA OUT	O	Data output (LC7218M, PLL)
22	CLOCK	O	Clock output (LC7218M, PLL)
23	CE	O	ENABLE output (LC7218)
24	VSS	–	GND
25	S	O	ENABLE output (NJU7305)
26	KARAOKE	O	KARAOKE PON switch output "H": ON
27	BASS $\overline{ON}$	O	Not used
28	BASS LOW	O	Not used
29	SURR	O	SURROUND mode selection output
30	SURR	O	
31	SURR	O	DSP control output "L": ON "H": OFF
32	SIRCS	I	SIRCS signal input
33	BACK UP	I	BACKUP mode input "L": BACKUP mode
34	AUBOUT	O	Audio bus output
35	$\overline{RESET}$	I	SYSTEM RESET input "L": RESET
36	AUBIN	I	Audio bus output
37	RDSSTART	I	RDS DATA START signal input
38	FUNCTION B	O	Spectrum analyzer input selection control
39	FUNCTION A	O	Spectrum analyzer input selection control
40	VDD	–	Power Supply 5V
41	X2	I	Main clock 10MHz
42	X1	I	Main clock 10MHz
43	GND	–	GND

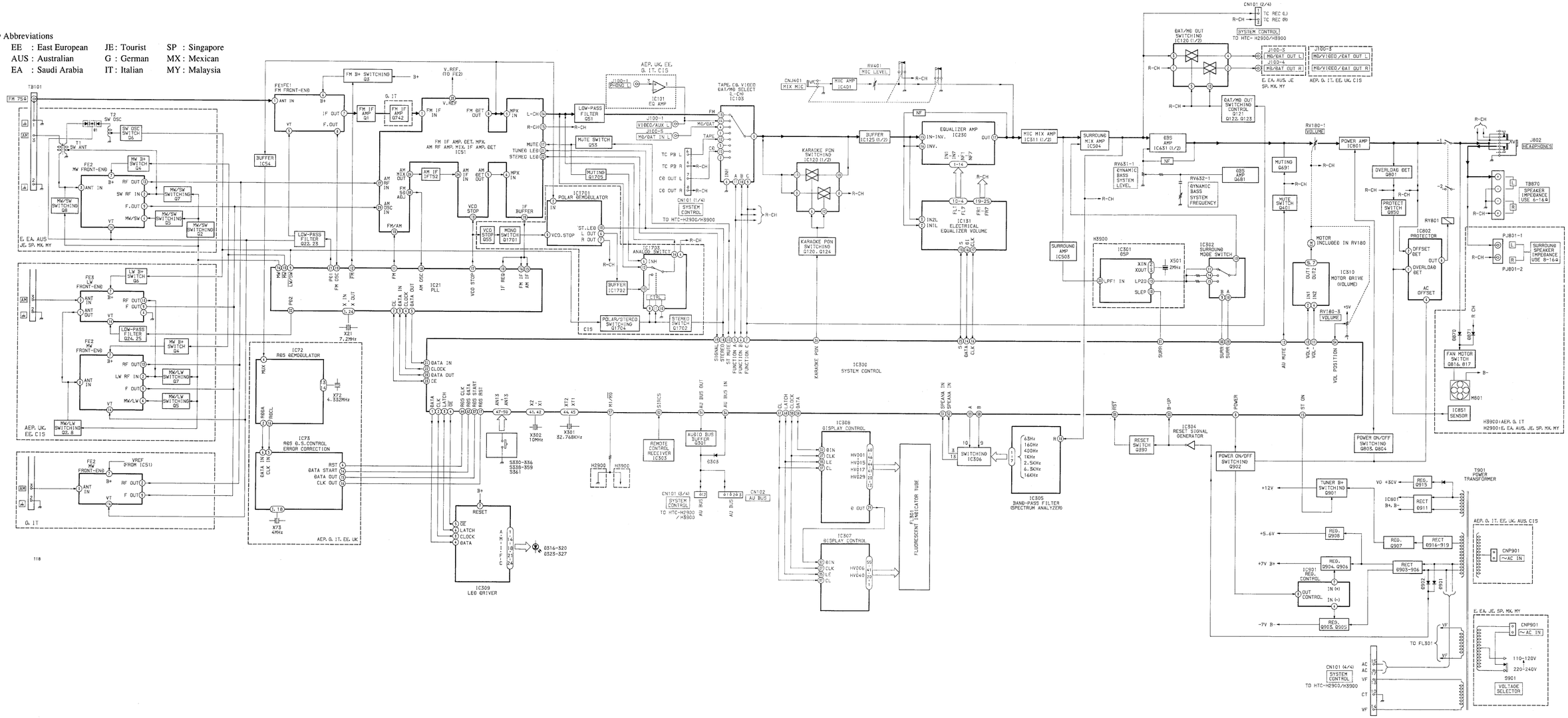
		㉙	㉚
SURROUND	1	I	O
SURROUND	2	O	I
SURROUND	3	I	I
SURROUND	OFF	O	O

Pin No.	Pin Name	I/O	Description
44	XT2	I	Sub clock 32.768kHz
45	XT1	I	Sub clock 32.768kHz
46	AVSS	–	GND
47	KEY	I	Key input (analog)
48	KEY	I	Key input (analog)
49	KEY	I	Key input (analog)
50	KEY	I	Key input (analog)
51	SPEANA	I	Spectrum analyzer data input
52	APEANA	I	Spectrum analyzer data input
53	VERIE	I	Destination selection input (analog)
54	VOLPOSITION	I	Volume position input (analog)
55	AVDD	–	Analog power supply +5V
56	AVREF	I	Analog system reference voltage input
57	MI/$\overline{\text{MO}}$	I	Model selection input "H": H3900 "L": H2900
58	DATA	O	FL tube data output
59	CLOCK	O	FL tube clock output
60	LATCH	O	FL tube latch signal output
61	$\overline{\text{CL}}$	O	FL tube data clear output
62	RDSDATA	I	RDS data input
63	—	–	Not used
64	RDSCLOCK	I	RDS clock input

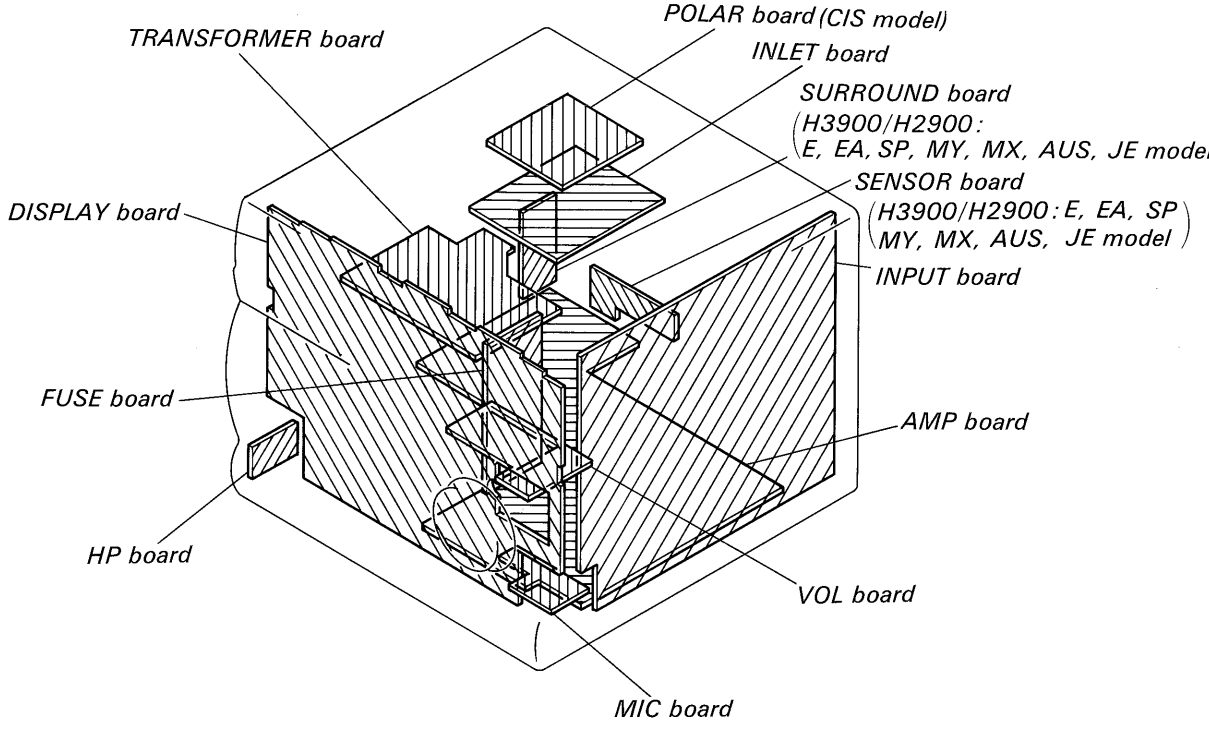
3-2. BLOCK DIAGRAM

• Abbreviations

EE : East European	JE : Tourist	SP : Singapore
AUS : Australian	G : German	MX : Mexican
EA : Saudi Arabia	IT : Italian	MY : Malaysia

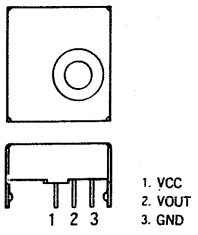


3-3. CIRCUIT BOARDS LOCATION

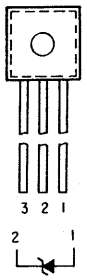


3-4. SEMICONDUCTOR LEAD LAYOUTS

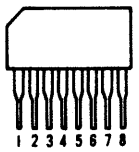
GP1U59XB



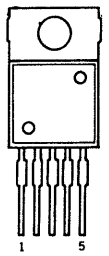
LM35DZ



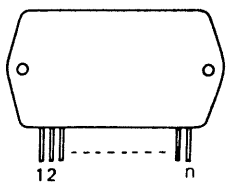
M5230L-A
μPC1237HA



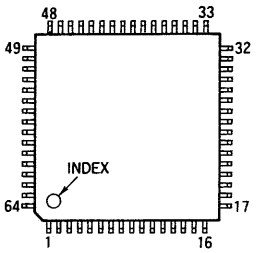
MC14052BF



STK-4182MK2

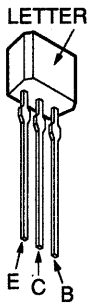


μPD78014BGC-615-AB8

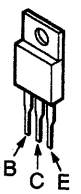


(TOP VIEW)

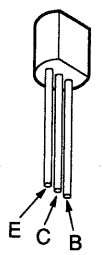
2SA1175-HFE
2SC2785



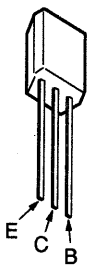
2SB1094-LK
2SD2012



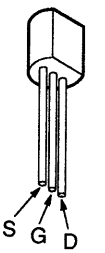
2SB1116-L
2SC1841
2SC3112-B



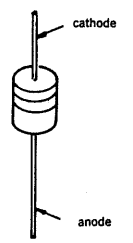
2SC26690Y
DTA114ES
DTA124ES
DTC114ES



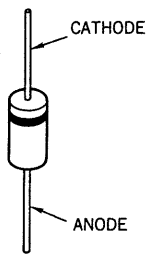
2SK246-GR3



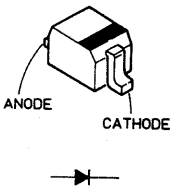
11EQS04
11ES2
HZS30-3L
HZS6C2L



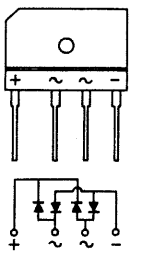
1N4148M
1S1585
UZL-12L3



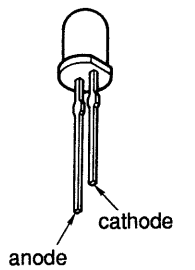
1SS352
DTZ5.6B



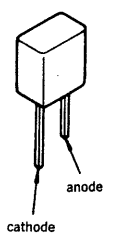
RBV-602-01



SEL1250SM



SEL5220S
SEL5420S



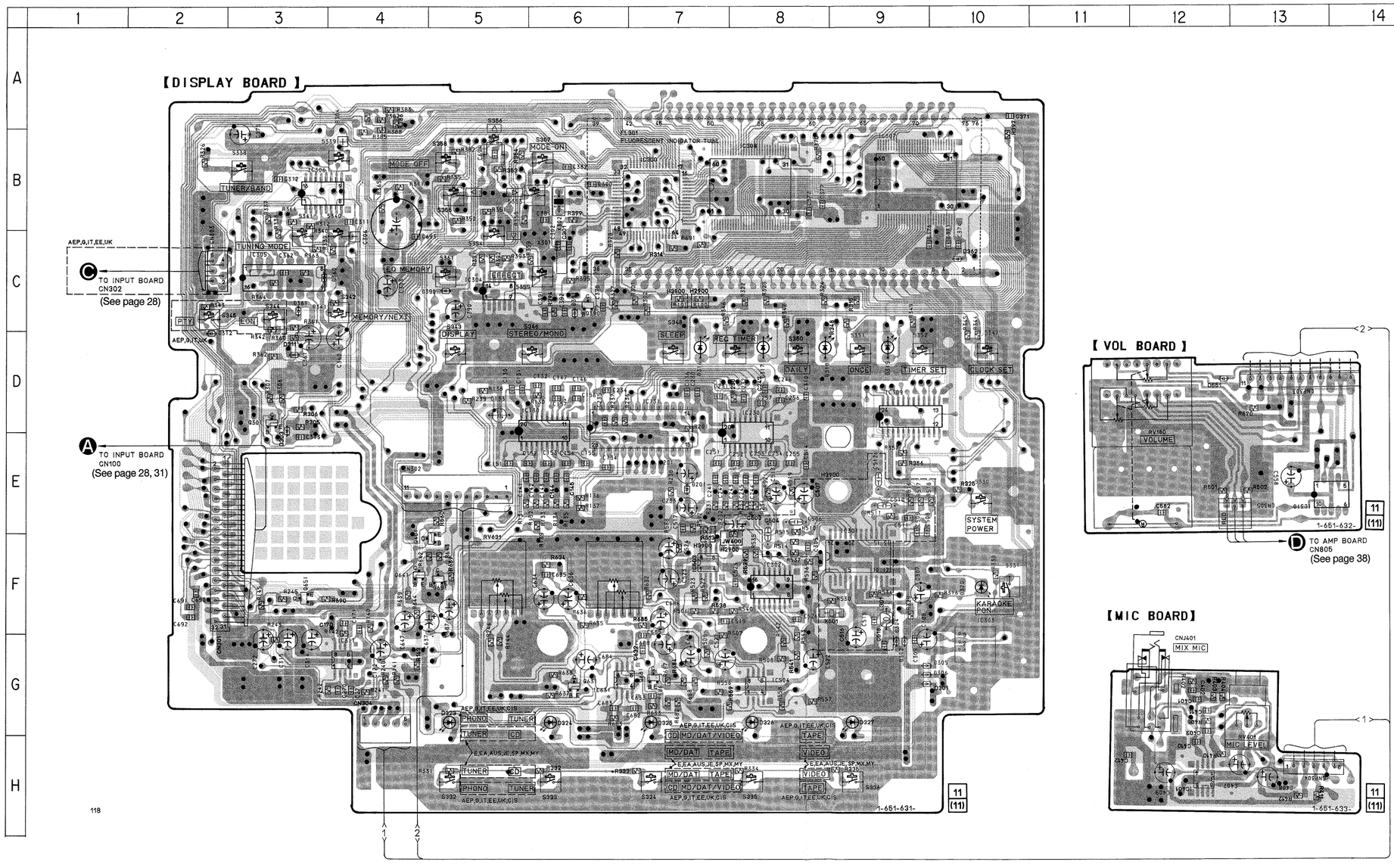
● **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D201	E-7	IC131	E-7
D301	G-9	IC230	E-8
D302	G-9	IC300	B-7
D303	D-3	IC301	F-9
D304	G-9	IC302	F-8
D305	G-9	IC303	G-10
D306	G-9	IC304	C-5
D311	D-3	IC305	C-3
D312	D-2	IC306	B-3
D316	D-7	IC307	B-9
D317	D-8	IC308	B-8
D318	D-8	IC309	D-9
D319	D-9	IC310	E-14
D320	F-10	IC311	G-4
D323	G-5	IC401	H-12
D324	G-6	IC503	F-7
D325	G-7	IC504	G-8
D326	G-8	IC631	G-6
D327	G-9		
D360	C-3	Q301	D-3
D361	C-3	Q390	C-6
D362	C-10	Q401	F-5
D390	C-5	Q631	G-6
D391	C-6	Q641	F-4
D551	D-12	Q651	F-3
		Q681	G-7
IC130	D-6	Q691	F-5

Note:

- ○——: parts extracted from the component side.
- ●: Through hole.
- ▒: Pattern on the side which is seen.
- ▒: Pattern of the rear side.
- Abbreviations

G : Germany	EE : East European
IT : Italian	JE : Tourist
AUS : Australian	SP : Singapore
EA : Saudi Arabia	MX : Mexican
	MY : Malaysia



3-6. SCHEMATIC DIAGRAM —DISPLAY Section—

【MIC BOARD】

【DISPLAY BOARD】

【VOL BOARD】

IC401 MIC AMP

IC230 EQUALIZER AMP

IC131 ELECTRICAL EQUALIZER VOLUME

IC130 EQUALIZER AMP

IC311 MIC MIX AMP

IC504 SURROUND MIX AMP

IC631 BBE

IC302 SURROUND MODE SWITCH

IC503 SURROUND AMP

IC301 EEPROM

IC310 MOTOR DRIVER

IC303 REMOTE CONTROL RECEIVER

IC306 SWITCHING

IC305 BAND PASS FILTER

IC307 DISPLAY CONTROL

IC304 RESET SIGNAL GENERATOR

IC300 SYSTEM CONTROL

IC309 LCD DRIVER

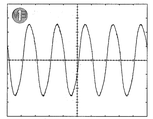
IC308 DISPLAY CONTROL

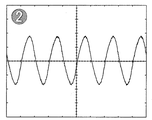
TO INPUT BOARD CN102 (A) (See page 25, 35)

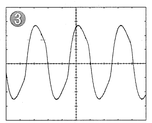
TO INPUT BOARD CN852 (D) (See page 25)

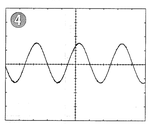
TO AMP BOARD CN805 (E) (See page 41)

AEP, G, IT, EE, UK









Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

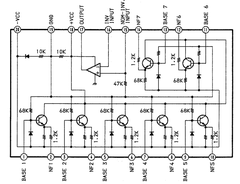
- ▭▭▭ : B+ Line
- ▭▭▭ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path. ⇨ : FM ⇨ : REC

- Abbreviations

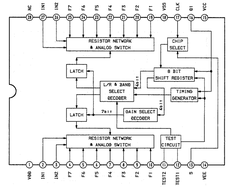
G : Germany	EE : East European
IT : Italian	JE : Tourist
AUS : Australian	SP : Singapore
EA : Saudi Arabia	MX : Mexican
	MY : Malaysia

● IC Block Diagrams

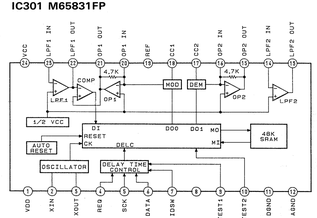
IC130, 230 M5289FP



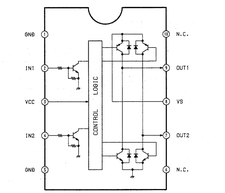
IC131 NJU7305L



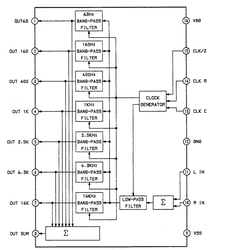
IC301 M65831FP



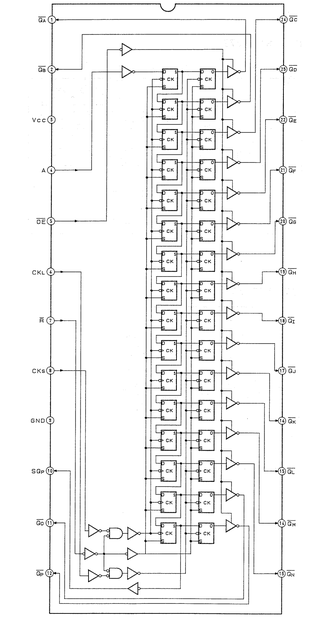
IC310 LB1638



IC305 XR1091DCP

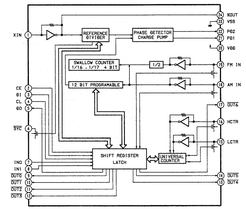


IC309 M66311FP

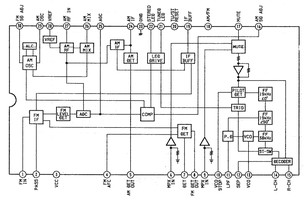


● IC Block Diagrams

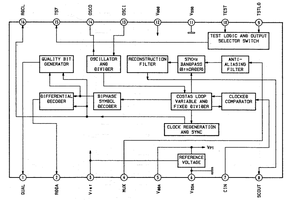
IC21 LC7218M



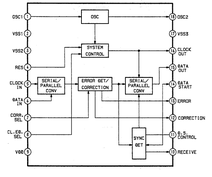
IC51 LA1851N

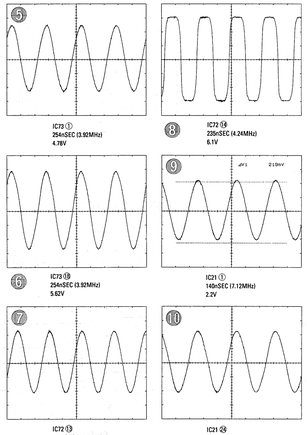


IC72 SAA6579



IC73 LC7073





Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ═══ : B+ Line
- ═══ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ⇨ : PB (DECK) ⇨ : CD
  ⇨ : REC (DECK) ⇨ : MD/DAT

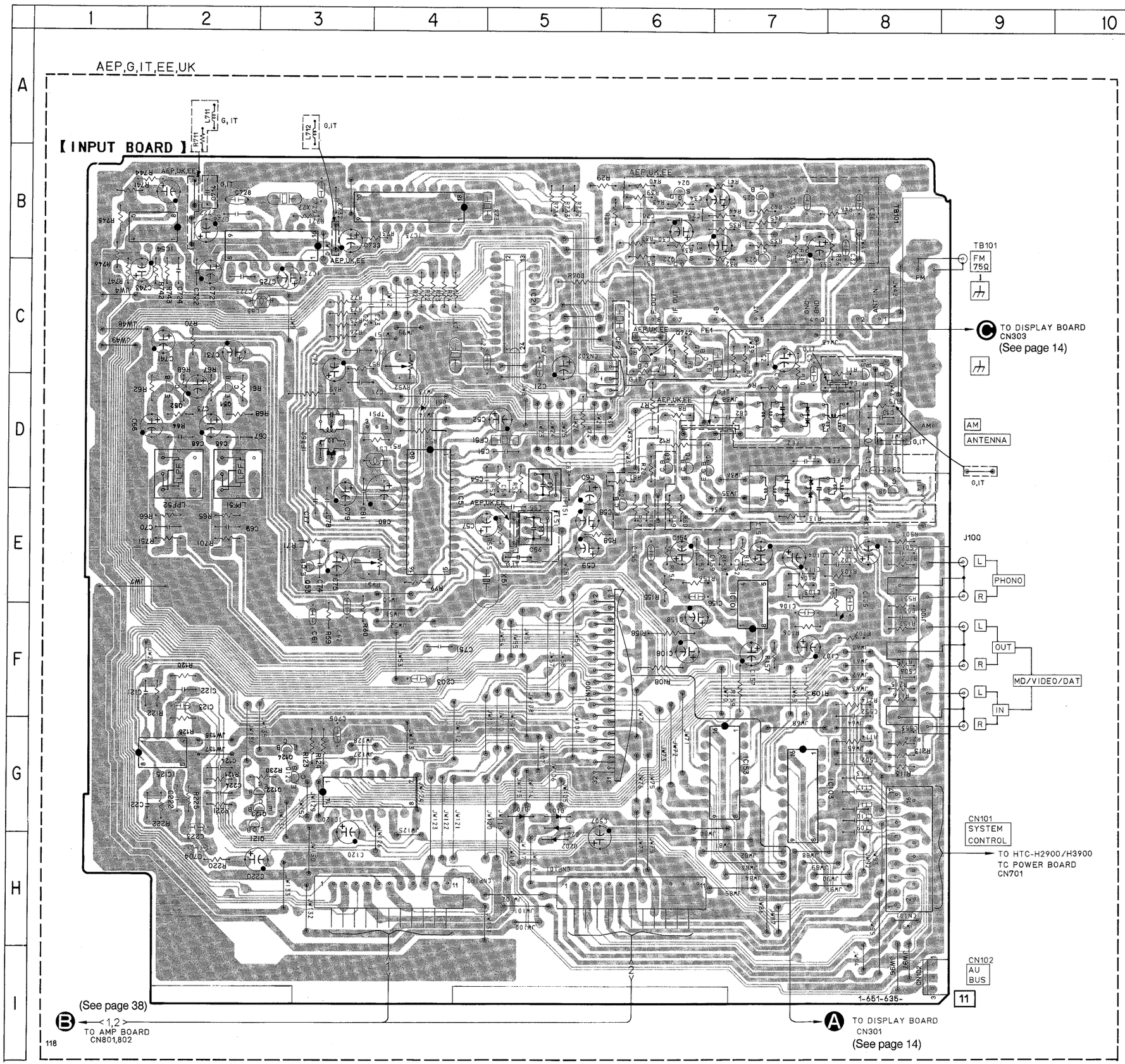
- Abbreviations
  G : Germany
  IT : Italian
  EE : East European

3-7. SCHEMATIC DIAGRAM —INPUT (AEP, G, IT, EE, UK) Section—

AEP, G, IT, EE, UK

【INPUT BOARD】

TO DISPLAY BOARD CN507 (See page 18)
TO DISPLAY BOARD CN507 (See page 19)
TO AMP BOARD CN602 (See page 41)
TO AMP BOARD CN601 (See page 41)



● **Semiconductor Location**

Ref. No.	Location
D51	D-4
D101	G-5
D102	G-5
D201	G-5
D202	H-5
IC21	C-5
IC51	E-4
IC54	B-2
IC72	B-3
IC73	B-4
IC101	F-7
IC103	G-7
IC120	G-3
IC125	G-2
IC153	G-7
Q1	C-6
Q2	E-6
Q3	D-6
Q4	D-6
Q5	D-8
Q6	D-6
Q7	D-8
Q8	E-8
Q22	C-6
Q23	C-7
Q24	B-6
Q25	B-7
Q51	D-2
Q52	D-2
Q53	E-3
Q120	G-3
Q121	G-2
Q122	G-3
Q123	G-3
Q124	G-3
Q742	C-6

Note:

- ○—— : parts extracted from the component side.
- Abbreviations
  G : Germany
  IT : Italian
  EE : East European

3-9. PRINTED WIRING BOARDS –INPUT (E, EA, AUS, JE, SP, MX, MY, CIS) Section–

● See page 12 for Circuit Boards Location. ● See page 13 for Semiconductor Lead Layouts.

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D81	C-4	Q3	D-7
D82	C-4	Q4	D-7
D101	G-6	Q5	C-9
D102	G-6	Q6	D-7
D201	G-6	Q7	C-9
D202	G-6	Q8	D-9
D1701	C-15	Q22	B-7
D1702	B-13	Q23	B-8
D1703	A-14	Q24	B-7
D1704	C-13	Q25	B-8
D1705	A-14	Q51	C-3
		Q52	C-3
IC21	C-6	Q53	E-4
IC51	E-5	Q54	B-5
IC101	E-8	Q55	B-6
IC103	G-8	Q120	G-4
IC120	G-4	Q121	G-3
IC125	G-2	Q122	G-3
IC153	G-7	Q123	G-3
IC1701	D-14	Q124	G-4
IC1702	D-12	Q1701	C-13
IC1703	B-14	Q1702	C-14
		Q1703	A-14
Q1	C-7	Q1704	A-14
Q2	D-6	Q1705	A-13

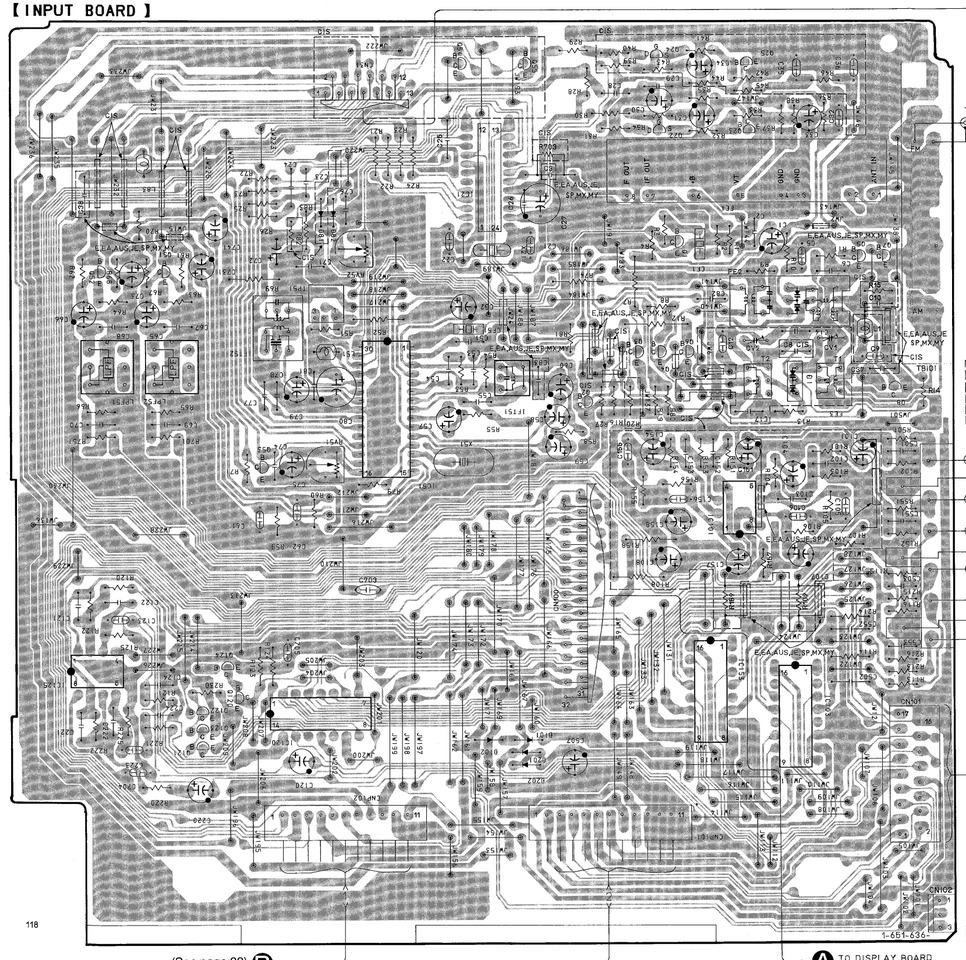
Note:

- ○—— : parts extracted from the component side.
- Abbreviations

AUS : Australian
EA : Saudi Arabia
JE : Tourist
SP : Singapore
MX : Mexican
MY : Malaysia

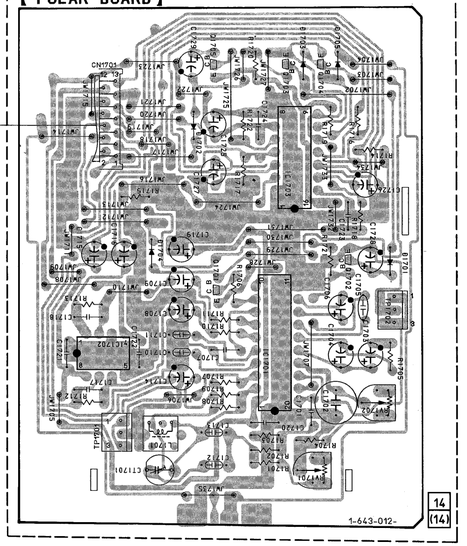
E,EA,AUS,JE,SP,MX,MY,CIS

【INPUT BOARD】



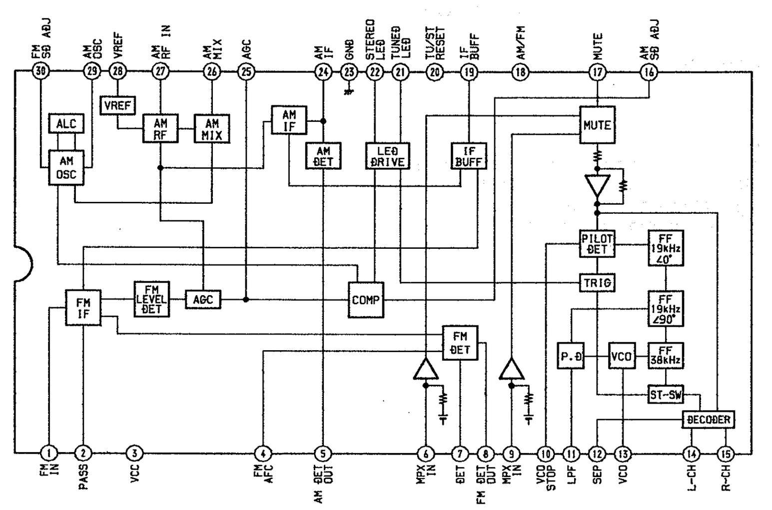
CIS

【POLAR BOARD】



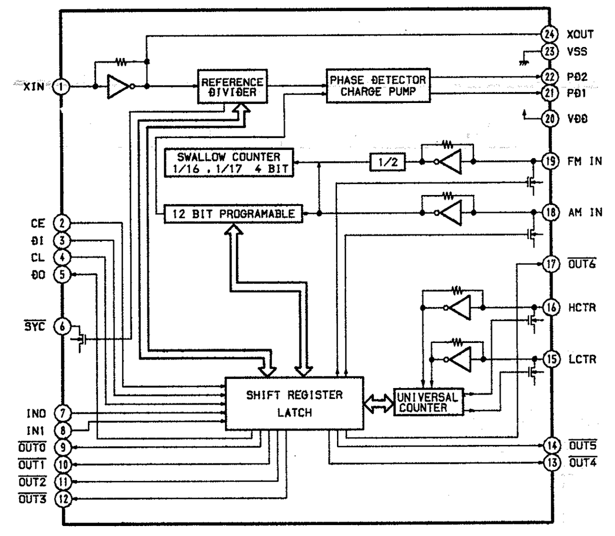
- IC Block Diagrams

IC51 LA1851N

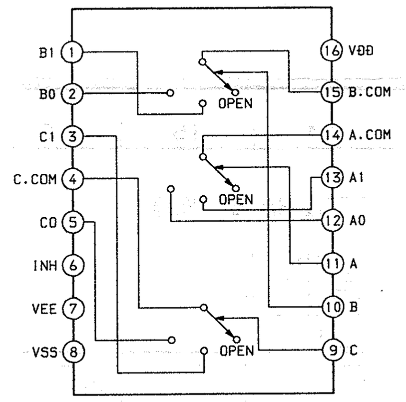


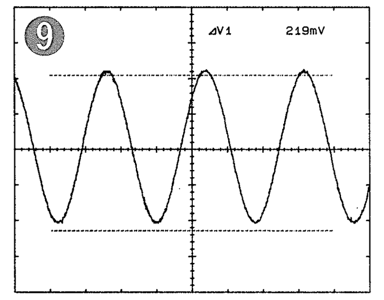
FM SD ADJ
AM OSC
VREF
AM RF IN
AM MIX
AGC
AM IF
GND
STEREO LED
TUNED LED
TU/ST RESET
IF BUFF
AM/FM
MUTE
AM SD ADJ
ALC
AM OSC
AM RF
AM MIX
AM DET
LED DRIVE
IF BUFF
PILOT DET
TRIG
FM IF
FM LEVEL DET
COMP
FM DET
P.D
VCO
ST-SW
DECODER
FM IN
PASS
VCC
FM AFC
AM DET OUT
MPX IN
DET
FM DET OUT
VCO STOP
LPF
SEP
L-CH
R-CH

IC21 LC7218M

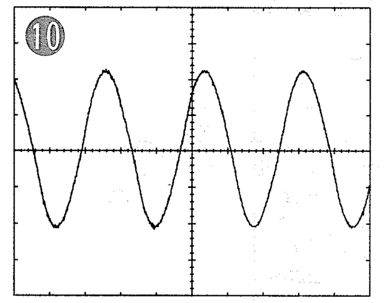


IC1703 MC14053BCP





IC21 ①
140nSEC (7.12MHz)
2.2V



IC21 ㉔
140nSEC (7.12MHz)
2.2V

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▬ : B+ Line
- ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : SW (CIS:LW)
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ⊳ : PB (DECK) ⇨ : CD
  ⊳⊳ : REC (DECK) ⇨ : MD/VIDEO/DAT

- Abbreviations
  AUS : Australian SP : Singapore
  EA : Saudi Arabia MX : Mexican
  JE : Tourist MY : Malaysia

3-10. SCHEMATIC DIAGRAM —INPUT (E, EA, AUS, JE, SP, MX, MY, CIS) Section—

E, EA, AUS, JE, SP, MX, MY, CIS
【INPUT BOARD】
TO DISPLAY BOARD CN301
(See page 18)
IC101 EQ AMP
IC103 FUNCTION SWITCH
IC125 BUFFER
IC120 KARAOKE PON DAT/MD OUT SWITCHING
IC153 FUNCTION SWITCH
Q122, 123 DAT/MD OUT SWITCHING CONTROL
Q120, 124 KARAOKE PON SWITCHING CONTROL
Q121 DAT/MD OUT SWITCHING CONTROL
Q22, 23 LOW-PASS FILTER
Q24, 25 LOW-PASS FILTER
Q2, 5 BAND SELECT
Q3 FM B+ SWITCHING
Q1 FM IF AMP
Q6 LW B+ SWITCHING
Q4 MW B+ SWITCHING
Q53 MUTE SWITCH
Q51, 52 LOW-PASS FILTER
Q54, 55 VCO ON/OFF
IC51 FM IF AMP, MPX AM RF AMP, DET
IC21 PLL
FM TUNING LEVEL
AM TUNING LEVEL
FM NULL
CN101 SYSTEM CONTROL
TO HTC-H2900 /H3900 CN701
CN102 AU BUS
(See page 41) B TO AMP BOARD CN802
C TO AMP BOARD CN801 (See page 41)
CIS
【POLAR BOARD】
IC1701 POLAR DEMODULATOR
IC1702 BUFFER
IC1703 ANALOG SWITCH
Q1701 MONO SWITCH
Q1702 STEREO SWITCH
Q1703 MUTE
Q1704 POLAR/STEREO SWITCH
Q1705 MUTE
SUB CARRIER LEVEL
SUB CARRIER Q PEAK

• **Semiconductor Location**

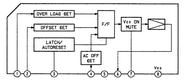
Ref. No.	Location	Ref. No.	Location
D801	D-3	D919	H-5
D802	D-7		
D803	D-8	IC801	C-5
D851	D-3	IC802	D-9
D860	D-8	IC851	B-5
D861	D-8	IC901	G-2
D870	D-9		
D871	D-9	Q801	D-3
D901	E-3	Q802	D-7
D902	E-4	Q803	D-5
D903	I-5	Q804	E-5
D904	H-5	Q816	F-6
D905	I-5	Q817	G-6
D906	I-5	Q850	D-9
D907	H-3	Q851	C-9
D908	H-2	Q901	H-4
D909	I-4	Q902	I-4
D911	G-5	Q903	G-3
D912	I-4	Q904	H-3
D913	F-5	Q905	H-3
D914	E-4	Q906	H-2
D915	E-5	Q907	H-4
D916	G-5	Q908	H-3
D917	H-5	Q915	E-5
D918	H-5		

Note:
- ○—— : parts extracted from the component side.
- Abbreviations

G : Germany	EE : East European
IT : Italian	JE : Tourist
AUS : Australian	SP : Singapore
EA : Saudi Arabia	MX : Mexican
	MY : Malaysia

• **IC Block Diagram**

IC802 μPC1237HA



Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.
- ▬ : fusible resistor.
- ▭ : panel designation.

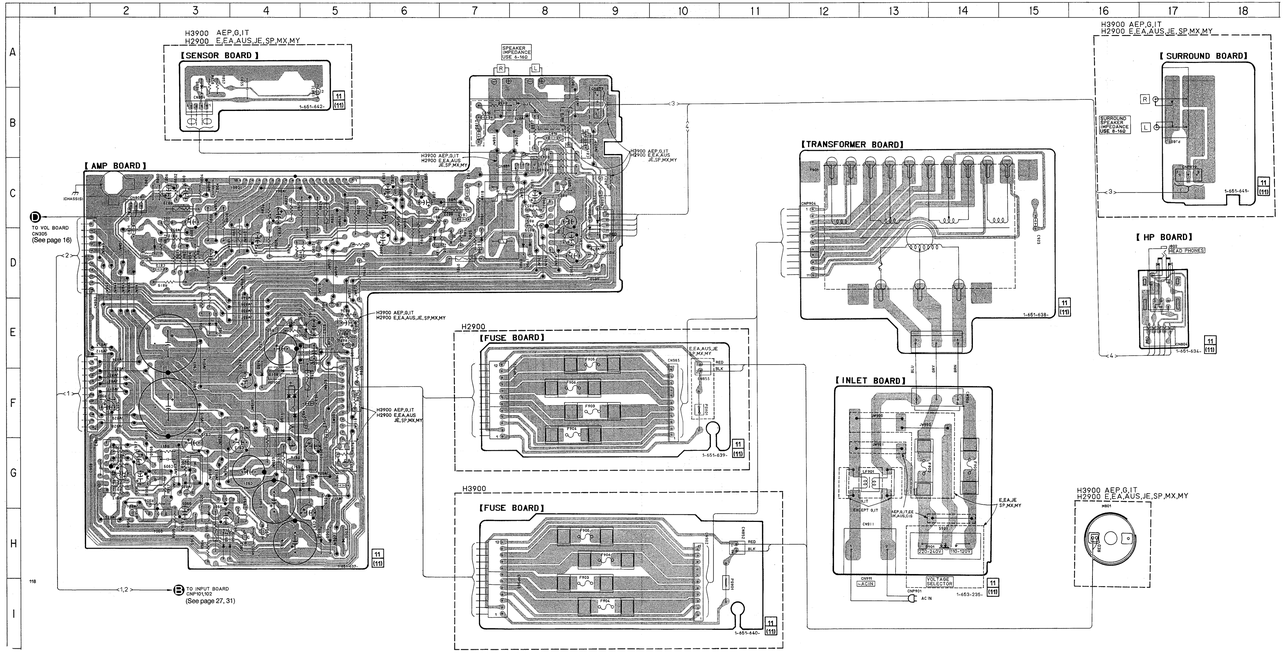
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ⏚ : B+ Line
- ⏚ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : F.M.

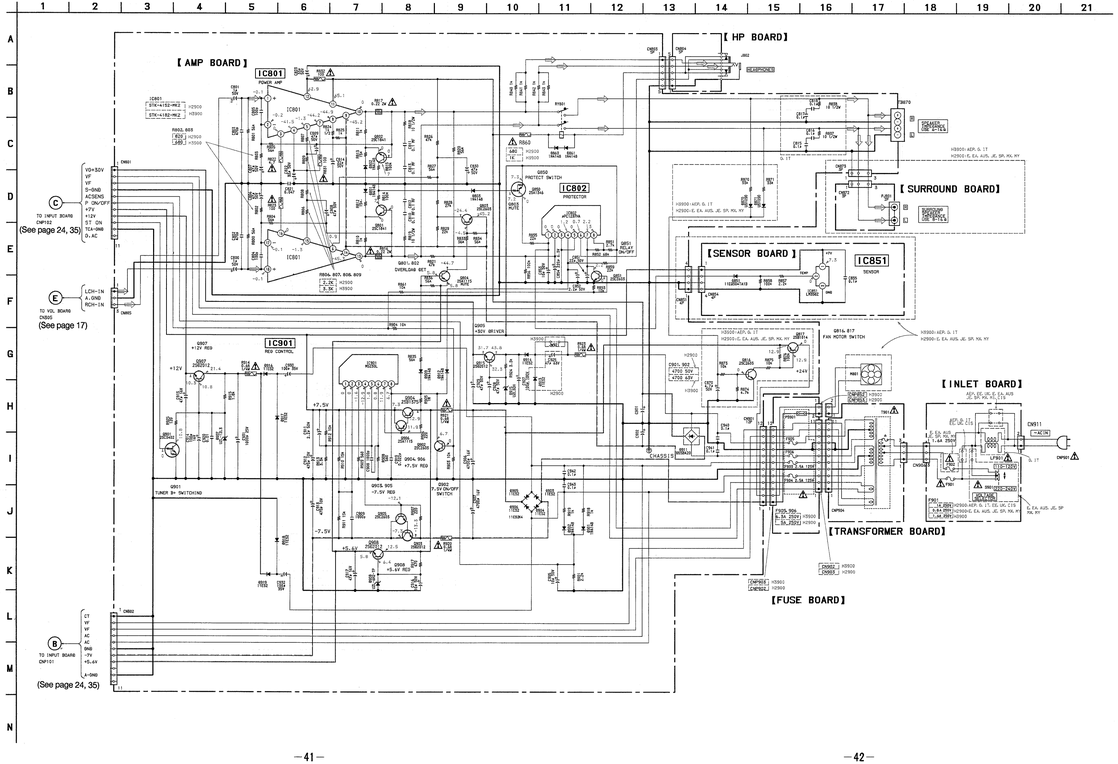
- Abbreviations

G : Germany	EE : East European
IT : Italian	JE : Tourist
AUS : Australian	SP : Singapore
EA : Saudi Arabia	MX : Mexican
	MY : Malaysia

3-11. PRINTED WIRING BOARDS —AMP Section— ●See page 12 for Circuit Boards Location. ●See page 13 for Semiconductor Lead Layouts.



3-12. SCHEMATIC DIAGRAM —AMP Section—



SECTION 4
EXPLODED VIEWS

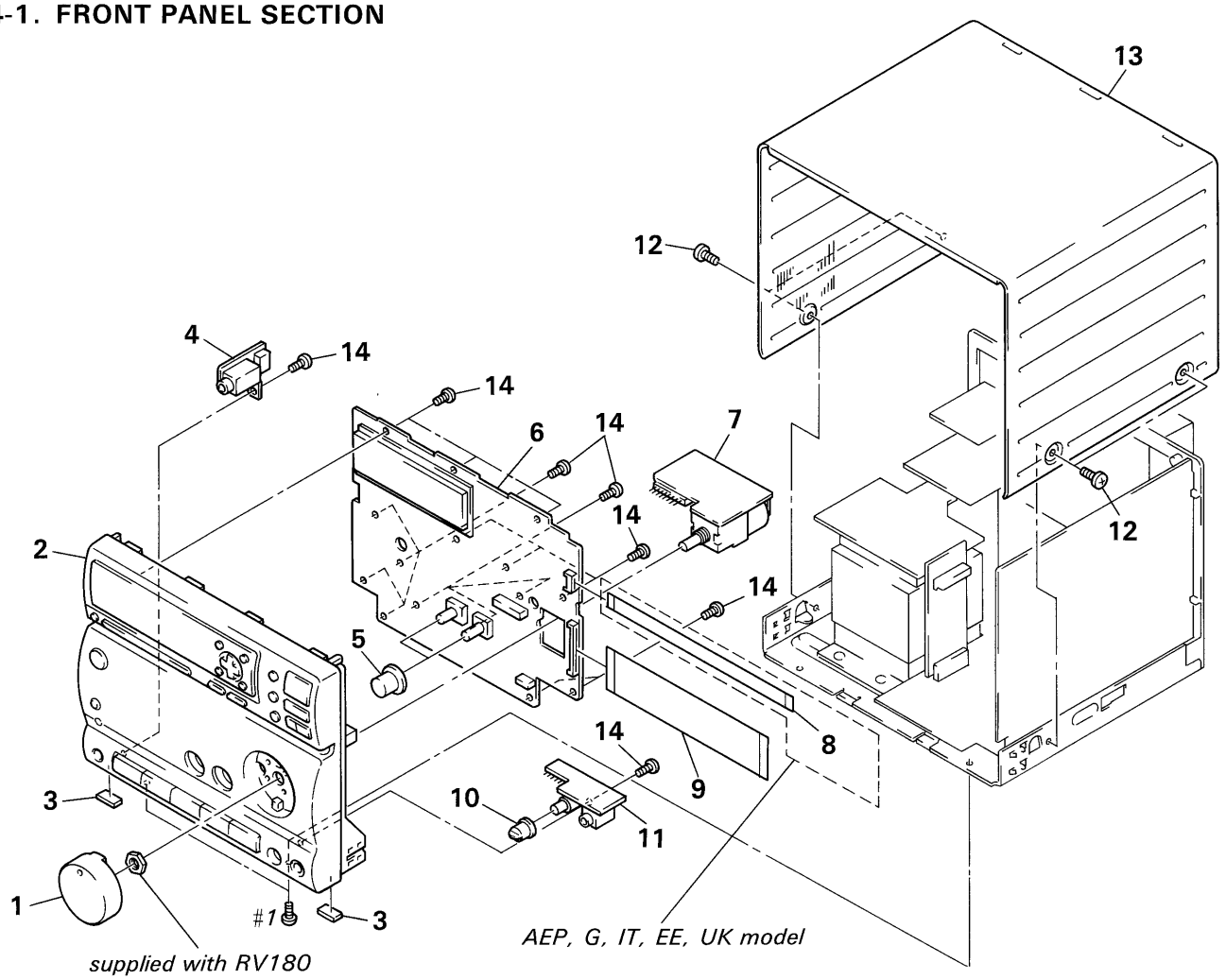
NOTE:

- –XX,–X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviations

IT : Italian	EA : Saudi Arabia	MY : Malaysia
G : German	MX : Mexican	AUS : Australian
EE : East European	SP : Singapore	JE : Tourist

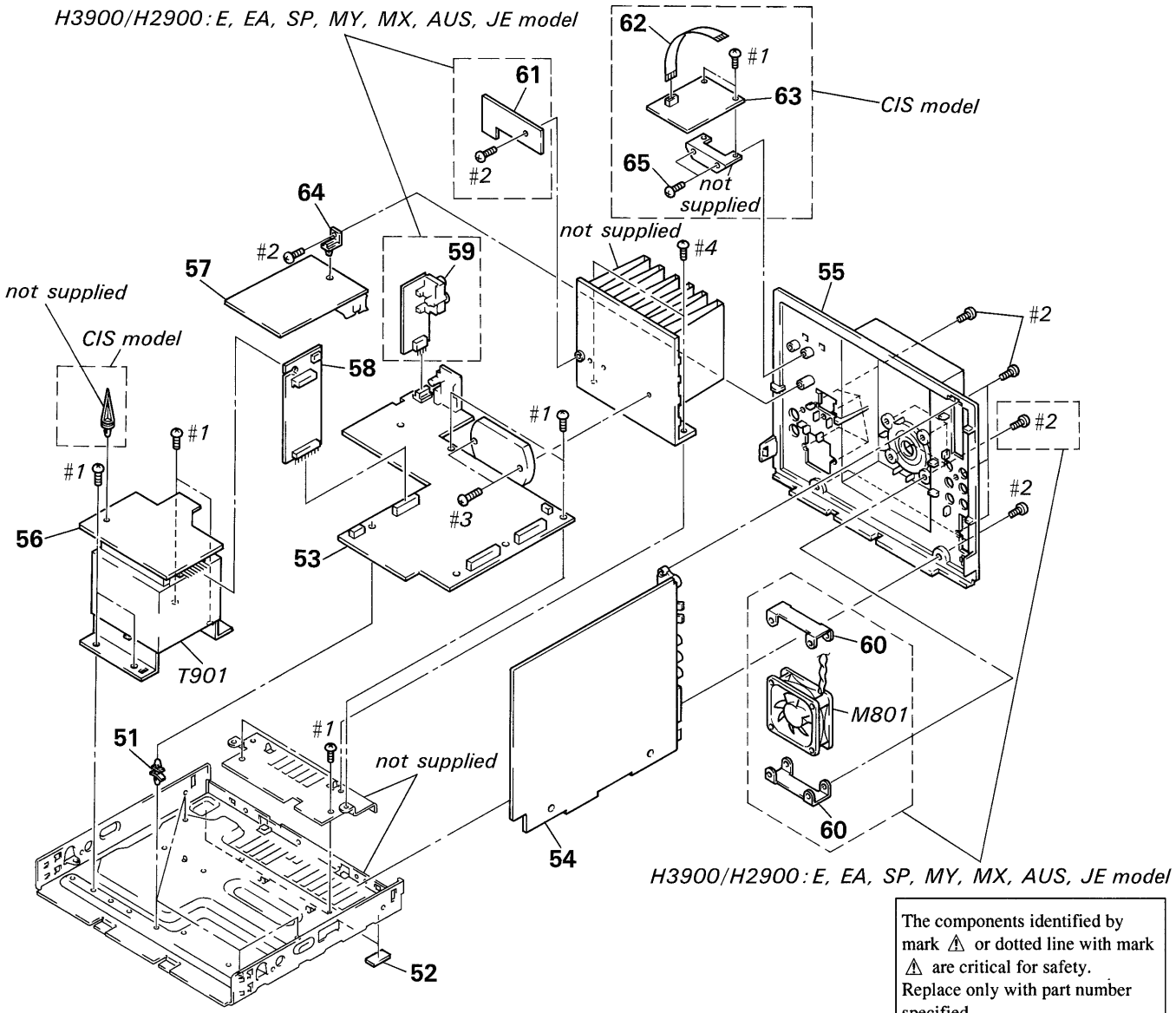
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-1. FRONT PANEL SECTION



Ref.No.	Part No.	Description	Remark
1	4-965-511-01	KNOB (VOLUME)	
2	X-4944-615-1	PANEL ASSY, FRONT (H2900:AEP, G, IT, EE, UK)	
2	X-4944-616-1	PANEL ASSY, FRONT (E, EA, SP, MY, MX, AUS, JE)	
2	X-4944-617-1	PANEL ASSY, FRONT (H3900)	
2	X-4944-646-1	PANEL ASSY, FRONT (CIS)	
3	4-930-336-61	FOOT (FELT)	
*4	1-651-634-11	HP BOARD	
5	4-964-808-01	KNOB (DBS)	
*6	A-4369-330-A	DISPLAY BOARD, COMPLETE (H3900:AEP)	
*6	A-4369-354-A	DISPLAY BOARD, COMPLETE (H2900:AEP)	
*6	A-4369-355-A	DISPLAY BOARD, COMPLETE (EE)	
*6	A-4369-358-A	DISPLAY BOARD, COMPLETE (H3900:G)	
*6	A-4369-359-A	DISPLAY BOARD, COMPLETE (H3900:IT)	
*6	A-4369-372-A	DISPLAY BOARD, COMPLETE (E, EA, SP, MY, MX, AUS)	
*6	A-4369-373-A	DISPLAY BOARD, COMPLETE (JE)	
*6	A-4369-393-A	DISPLAY BOARD, COMPLETE (H2900:G)	
*6	A-4369-394-A	DISPLAY BOARD, COMPLETE (H2900:IT)	
*6	A-4369-395-A	DISPLAY BOARD, COMPLETE (UK)	
*6	A-4371-248-A	DISPLAY BOARD, COMPLETE (CIS)	
*7	1-651-632-11	VOL BOARD	
8	1-575-848-11	WIRE, FLAT TYPE (5 CORE) (AEP, G, IT, EE, UK)	
9	1-696-887-11	WIRE (FLAT TYPE) (32 CORE)	
10	4-964-806-01	KNOB (MIC)	
*11	1-651-633-11	MIC BOARD	
12	3-363-099-01	SCREW (CASE 3 TP2)	
13	4-964-824-11	CASE (H2900:AEP, G, IT, EE, UK, CIS)	
13	4-964-824-21	CASE (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
14	4-951-620-01	SCREW (2.6X8), +BVTP	

4-2. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark
*51	3-350-857-01	HOLDER (A), PCB	
52	4-930-336-61	FOOT (FELT)	
*53	A-4369-331-A	AMPLIFIER BOARD, COMPLETE (H3900:AEP)	
*53	A-4369-350-A	AMPLIFIER BOARD, COMPLETE (H2900:AEP, EE, CIS)	
*53	A-4369-362-A	AMPLIFIER BOARD, COMPLETE (H3900:G, IT)	
*53	A-4369-403-A	AMPLIFIER BOARD, COMPLETE (H2900:G, IT)	
*53	A-4369-404-A	AMPLIFIER BOARD, COMPLETE (UK)	
*53	A-4371-008-A	AMPLIFIER BOARD, COMPLETE (E, EA, SP, MY, MX, AUS, JE)	
*54	A-4369-346-A	INPUT BOARD, COMPLETE (AEP)	
*54	A-4369-347-A	INPUT BOARD, COMPLETE (EE)	
*54	A-4369-348-A	INPUT BOARD, COMPLETE (CIS)	
*54	A-4369-374-A	INPUT BOARD, COMPLETE (E, EA, SP, MY, MX, AUS)	
*54	A-4369-381-A	INPUT BOARD, COMPLETE (JE)	
*54	A-4369-390-A	INPUT BOARD, COMPLETE (G, IT)	
*54	A-4369-391-A	INPUT BOARD, COMPLETE (UK)	
*55	4-964-804-01	PANEL, BACK (H2900:AEP, G, IT, EE, UK, CIS)	
*55	4-964-805-01	PANEL, BACK (H3900)	
*55	4-964-805-11	PANEL, BACK (E, EA, SP, MY, MX, JE)	
*55	4-964-805-21	PANEL, BACK (AUS)	
*56	1-651-638-11	TRANSFORMER BOARD	

Ref.No.	Part No.	Description	Remark
*57	1-653-235-11	INLET BOARD	
*58	1-651-639-11	FUSE BOARD (H2900)	
*58	1-651-640-11	FUSE BOARD (H3900)	
*59	1-651-641-11	SURROUND BOARD (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
60	4-956-816-01	BRACKET (FAN 20A) (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
*61	1-651-642-11	SENSOR BOARD (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
62	1-575-784-11	WIRE, FLAT TYPE (13 CORE) (CIS)	
*63	A-4369-349-A	POLAR BOARD, COMPLETE (CIS)	
*64	4-968-209-01	HINGE, PCB	
65	4-951-620-01	SCREW (2.6X8), +BVTP	
M801	1-698-403-11	MOTOR, FAN (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
⚠T901	1-426-653-11	TRANSFORMER, POWER (H2900:E, EA, SP, MY, MX, AUS, JE)	
⚠T901	1-426-654-11	TRANSFORMER, POWER (H2900:AEP, G, IT, EE, CIS)	
⚠T901	1-426-655-11	TRANSFORMER, POWER (H3900)	
⚠T901	1-426-739-11	TRANSFORMER, POWER (UK)	

SECTION 5
ELECTRICAL PARTS LIST

DISPLAY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA··· : μA···, uPA··· : μPA···, uPB··· : μPB···, uPC··· : μPC···, uPD··· : μPD···
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviations
  IT : Italian
  G : German
  EE : East European
  EA : Saudi Arabia
  MX : Mexican
  SP : Singapore
  MY : Malaysia
  AUS : Australian
  JE : Tourist

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description			Remark
*	A-4369-330-A	DISPLAY BOARD, COMPLETE (H3900:AEP)			
*	A-4369-354-A	DISPLAY BOARD, COMPLETE (H2900:AEP)			
*	A-4369-355-A	DISPLAY BOARD, COMPLETE (EE)			
*	A-4369-358-A	DISPLAY BOARD, COMPLETE (H3900:G)			
*	A-4369-359-A	DISPLAY BOARD, COMPLETE (H3900:IT)			
*	A-4369-372-A	DISPLAY BOARD, COMPLETE (E, EA, SP, MY, MX, AUS)			
*	A-4369-373-A	DISPLAY BOARD, COMPLETE (JE)			
*	A-4369-393-A	DISPLAY BOARD, COMPLETE (H2900:G)			
*	A-4369-394-A	DISPLAY BOARD, COMPLETE (H2900:IT)			
*	A-4369-395-A	DISPLAY BOARD, COMPLETE (UK)			
*	A-4371-248-A	DISPLAY BOARD, COMPLETE (CIS)			
		**********			
*	4-944-514-11	HOLDER (FL TUBE)			
		< CAPACITOR >			
C130	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C131	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C132	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C133	1-126-163-11	ELECT	4.7uF	20%	50V
C134	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C136	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C141	1-164-346-11	CERAMIC CHIP	1uF		16V
C142	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C143	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C144	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C145	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C146	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C147	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C151	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C152	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C153	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C154	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C155	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C156	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C157	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C170	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C171	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C172	1-126-157-11	ELECT	10uF	20%	16V
C201	1-126-163-11	ELECT	4.7uF	20%	50V
C230	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C231	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C232	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C233	1-126-163-11	ELECT	4.7uF	20%	50V
C234	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C235	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C241	1-164-346-11	CERAMIC CHIP	1uF		16V
C242	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C243	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C244	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C245	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C246	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C247	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C251	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C252	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C253	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C254	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C255	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C256	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C257	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C270	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C271	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C272	1-126-157-11	ELECT	10uF	20%	16V
C300	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C301	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C302	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C303	1-126-157-11	ELECT	10uF	20%	16V
C305	1-163-006-11	CERAMIC CHIP	560PF	10%	50V (H3900)
C306	1-125-447-11	DOUBLE LAYERS	1F		5.5V
C307	1-126-157-11	ELECT	10uF	20%	16V
C308	1-126-157-11	ELECT	10uF	20%	16V
C309	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C310	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C311	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C312	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C313	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C314	1-126-157-11	ELECT	10uF	20%	16V
C315	1-126-157-11	ELECT	10uF	20%	16V
C360	1-126-177-11	ELECT	100uF	20%	10V
C361	1-126-177-11	ELECT	100uF	20%	10V
C362	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

DISPLAY

Ref.No.	Part No.	Description			Remark
C370	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C371	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C372	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C373	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C374	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C375	1-124-261-00	ELECT	10uF	20%	50V
C376	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C377	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C381	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C382	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C390	1-126-157-11	ELECT	10uF	20%	16V
C391	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C392	1-164-346-11	CERAMIC CHIP	1uF		16V
C503	1-126-163-11	ELECT	4.7uF	20%	50V (H3900)
C504	1-137-437-11	FILM	0.0056uF	5%	50V (H3900)
C506	1-136-165-00	FILM	0.1uF	5%	50V (H3900)
C507	1-124-589-11	ELECT	47uF	20%	16V (H3900)
C508	1-163-038-00	CERAMIC CHIP	0.1uF		25V (H3900)
C509	1-163-038-00	CERAMIC CHIP	0.1uF		25V (H3900)
C510	1-136-165-00	FILM	0.1uF	5%	50V (H3900)
C511	1-163-006-11	CERAMIC CHIP	560PF	10%	50V (H3900)
C512	1-137-437-11	FILM	0.0056uF	5%	50V (H3900)
C513	1-126-157-11	ELECT	10uF	20%	16V
C514	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C515	1-163-038-00	CERAMIC CHIP	0.1uF		25V (H3900)
C516	1-126-177-11	ELECT	100uF	20%	10V (H3900)
C517	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C518	1-163-038-00	CERAMIC CHIP	0.1uF		25V (H3900)
C519	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C521	1-124-589-11	ELECT	47uF	20%	16V
C522	1-124-589-11	ELECT	47uF	20%	16V
C523	1-124-589-11	ELECT	47uF	20%	16V
C524	1-124-589-11	ELECT	47uF	20%	16V
C525	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C526	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C632	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C633	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C634	1-124-465-00	ELECT	0.47uF	20%	50V
C635	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C636	1-126-301-11	ELECT	1uF	20%	50V
C637	1-126-157-11	ELECT	10uF	20%	16V
C638	1-124-589-11	ELECT	47uF	20%	16V
C647	1-124-257-00	ELECT	2.2uF	20%	50V
C682	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C683	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C684	1-124-465-00	ELECT	0.47uF	20%	50V
C685	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C686	1-126-301-11	ELECT	1uF	20%	50V
C687	1-126-157-11	ELECT	10uF	20%	16V
C688	1-124-589-11	ELECT	47uF	20%	16V
C690	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C691	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C692	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C693	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C694	1-164-232-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN301	1-568-874-11	SOCKET, CONNECTOR 32P			
CN302	1-750-262-11	HOUSING, CONNECTOR 11P			
*CN303	1-568-848-11	SOCKET, CONNECTOR 5P			
CN304	1-695-994-11	HOUSING, CONNECTOR 5P			
		< DIODE >			
D201	8-719-977-03	DIODE	DTZ5.6B		
D301	8-719-016-74	DIODE	1SS352		
D302	8-719-016-74	DIODE	1SS352		
D303	8-719-016-74	DIODE	1SS352		
D304	8-719-016-74	DIODE	1SS352		
D305	8-719-016-74	DIODE	1SS352		
D306	8-719-016-74	DIODE	1SS352		
D311	8-719-016-74	DIODE	1SS352		
D312	8-719-016-74	DIODE	1SS352		
D316	8-719-032-87	LED	SEL5420S-TP (SLEEP)		
D317	8-719-032-83	LED	SEL5220S-TP (REC TIMER)		
D318	8-719-032-87	LED	SEL5420S-TP (DAILY)		
D319	8-719-032-87	LED	SEL5420S-TP (ONCE)		
D320	8-719-048-32	LED	SEL1250SM-TP5 (KARAOKE PON)		
D323	8-719-048-32	LED	SEL1250SM-TP5 (TUNER)		
D324	8-719-048-32	LED	SEL1250SM-TP5 (CD)		
D325	8-719-048-32	LED	SEL1250SM-TP5 (DAT/MD)		
D326	8-719-048-32	LED	SEL1250SM-TP5 (TAPE)		
D327	8-719-048-32	LED	SEL1250SM-TP5 (VIDEO)		
D360	8-719-977-03	DIODE	DTZ5.6B		
D361	8-719-977-03	DIODE	DTZ5.6B		
D362	8-719-977-03	DIODE	DTZ5.6B		
D390	8-719-016-74	DIODE	1SS352		
D391	8-719-016-74	DIODE	1SS352		
		< FLUORESCENT INDICATOR TUBE >			
FL1	1-517-292-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC130	8-759-087-18	IC	M5289FP-71NC		

Ref.No.	Part No.	Description	Remark
IC131	8-759-081-01	IC NJU7305L	
IC230	8-759-087-18	IC M5289FP-71NC	
IC300	8-759-258-56	IC uPD78014BGC-615-AB8	
IC301	8-759-053-14	IC M65831FP-600C (H3900)	
IC302	8-759-009-06	IC MC14052BF	
IC303	8-749-923-34	IC GP1U59XB	
IC304	8-759-925-74	IC SN74HC04ANS	
IC305	8-759-991-11	IC XR1091DCP	
IC306	8-759-009-06	IC MC14052BF	
IC307	8-759-094-11	IC SN755723FT	
IC308	8-759-094-11	IC SN755723FT	
IC309	8-759-636-56	IC M66311FP	
IC311	8-759-636-55	IC M5218AFP	
IC503	8-759-636-55	IC M5218AFP	
IC504	8-759-636-55	IC M5218AFP	
IC631	8-759-636-55	IC M5218AFP	
		< JUMPER RESISTOR >	
JW400	1-216-295-00	METAL CHIP 0 5% 1/10W (H2900)	
		< COIL >	
L301	1-410-496-11	INDUCTOR 1.5mH (H3900)	
		< TRANSISTOR >	
Q301	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q390	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q401	8-729-113-72	TRANSISTOR FN1A4M-M33	
Q631	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q641	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q651	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q681	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q691	8-729-107-46	TRANSISTOR 2SC3624A-L15	
		< RESISTOR >	
R100	1-216-073-00	METAL CHIP 10K 5% 1/10W (H2900)	
R101	1-216-073-00	METAL CHIP 10K 5% 1/10W (H3900)	
R130	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R131	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R132	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R133	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R134	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R135	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R136	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R137	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R138	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R139	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R140	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R141	1-216-081-00	METAL CHIP 22K 5% 1/10W	

Ref.No.	Part No.	Description	Remark
R142	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R143	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R144	1-216-033-00	METAL CHIP 220 5% 1/10W	
R145	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R201	1-216-025-00	METAL CHIP 100 5% 1/10W	
R230	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R231	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R232	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R233	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R234	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R235	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R236	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R237	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R238	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R239	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R240	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R241	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R242	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R243	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R244	1-216-033-00	METAL CHIP 220 5% 1/10W	
R245	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R301	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R302	1-216-041-00	METAL CHIP 470 5% 1/10W	(E, EA, SP, MY, MX, AUS)
R302	1-216-050-00	METAL GLAZE 1.1K 5% 1/10W	(AEP, UK)
R302	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	(EE)
R302	1-216-072-00	METAL CHIP 9.1K 5% 1/10W	(G)
R302	1-216-062-00	METAL CHIP 3.6K 5% 1/10W	(IT)
R302	1-216-081-00	METAL CHIP 22K 5% 1/10W	(JE)
R305	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R306	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R307	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R308	1-216-001-00	METAL CHIP 10 5% 1/10W	
R311	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R312	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R314	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R315	1-216-033-00	METAL CHIP 220 5% 1/10W	
R316	1-216-033-00	METAL CHIP 220 5% 1/10W	
R322	1-216-033-00	METAL CHIP 220 5% 1/10W	
R323	1-216-033-00	METAL CHIP 220 5% 1/10W	
R324	1-216-033-00	METAL CHIP 220 5% 1/10W	
R325	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R326	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R327	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R328	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R329	1-216-033-00	METAL CHIP 220 5% 1/10W	
R330	1-216-041-00	METAL CHIP 470 5% 1/10W	
R331	1-216-045-00	METAL CHIP 680 5% 1/10W	

DISPLAY

Ref.No.	Part No.	Description			Remark
R332	1-216-049-00	METAL CHIP	1K	5%	1/10W
R333	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R334	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R335	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R337	1-216-041-00	METAL CHIP	470	5%	1/10W
R338	1-216-045-00	METAL CHIP	680	5%	1/10W
R339	1-216-049-00	METAL CHIP	1K	5%	1/10W
R340	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R341	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R342	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (AEP,G, IT,EE,UK)
R343	1-216-076-00	METAL CHIP	13K	5%	1/10W (AEP,G, IT,EE,UK)
R344	1-216-041-00	METAL CHIP	470	5%	1/10W
R345	1-216-045-00	METAL CHIP	680	5%	1/10W
R346	1-216-049-00	METAL CHIP	1K	5%	1/10W
R347	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R348	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R349	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R350	1-216-041-00	METAL CHIP	470	5%	1/10W
R351	1-216-045-00	METAL CHIP	680	5%	1/10W
R352	1-216-049-00	METAL CHIP	1K	5%	1/10W
R353	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R354	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R355	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R356	1-216-073-00	METAL CHIP	10K	5%	1/10W
R357	1-216-073-00	METAL CHIP	10K	5%	1/10W
R359	1-216-076-00	METAL CHIP	13K	5%	1/10W
R360	1-216-017-00	METAL CHIP	47	5%	1/10W
R361	1-216-017-00	METAL CHIP	47	5%	1/10W
R362	1-216-073-00	METAL CHIP	10K	5%	1/10W
R363	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R364	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R365	1-216-049-00	METAL CHIP	1K	5%	1/10W
R366	1-216-049-00	METAL CHIP	1K	5%	1/10W
R370	1-216-025-00	METAL CHIP	100	5%	1/10W
R382	1-216-037-00	METAL CHIP	330	5%	1/10W
R383	1-216-037-00	METAL CHIP	330	5%	1/10W
R384	1-216-037-00	METAL CHIP	330	5%	1/10W
R385	1-216-049-00	METAL CHIP	1K	5%	1/10W
R386	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R387	1-216-073-00	METAL CHIP	10K	5%	1/10W
R388	1-216-073-00	METAL CHIP	10K	5%	1/10W
R391	1-216-095-00	METAL CHIP	82K	5%	1/10W
R392	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R393	1-216-113-00	METAL CHIP	470K	5%	1/10W
R394	1-216-081-00	METAL CHIP	22K	5%	1/10W
R395	1-216-081-00	METAL CHIP	22K	5%	1/10W
R397	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R399	1-216-097-00	METAL CHIP	100K	5%	1/10W
R506	1-216-085-00	METAL CHIP	33K	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W
R509	1-216-085-00	METAL CHIP	33K	5%	1/10W
R510	1-216-013-00	METAL CHIP	33	5%	1/10W (H3900)
R511	1-216-013-00	METAL CHIP	33	5%	1/10W (H3900)
R512	1-216-077-00	METAL CHIP	15K	5%	1/10W
R513	1-216-073-00	METAL CHIP	10K	5%	1/10W (H3900)
R514	1-216-073-00	METAL CHIP	10K	5%	1/10W (H3900)
R515	1-216-077-00	METAL CHIP	15K	5%	1/10W (H3900)
R516	1-216-077-00	METAL CHIP	15K	5%	1/10W (H3900)
R517	1-216-073-00	METAL CHIP	10K	5%	1/10W (H3900)
R518	1-216-077-00	METAL CHIP	15K	5%	1/10W (H3900)
R519	1-216-085-00	METAL CHIP	33K	5%	1/10W
R521	1-216-049-00	METAL CHIP	1K	5%	1/10W
R522	1-216-073-00	METAL CHIP	10K	5%	1/10W
R523	1-216-073-00	METAL CHIP	10K	5%	1/10W
R530	1-216-121-00	METAL CHIP	1M	5%	1/10W (H3900)
R534	1-216-073-00	METAL CHIP	10K	5%	1/10W (H3900)
R535	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R536	1-216-081-00	METAL CHIP	22K	5%	1/10W
R537	1-216-081-00	METAL CHIP	22K	5%	1/10W
R538	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R539	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R540	1-216-077-00	METAL CHIP	15K	5%	1/10W
R541	1-216-049-00	METAL CHIP	1K	5%	1/10W
R542	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R543	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R556	1-216-085-00	METAL CHIP	33K	5%	1/10W
R557	1-216-073-00	METAL CHIP	10K	5%	1/10W
R558	1-216-073-00	METAL CHIP	10K	5%	1/10W
R559	1-216-085-00	METAL CHIP	33K	5%	1/10W
R560	1-216-073-00	METAL CHIP	10K	5%	1/10W
R571	1-249-425-11	CARBON	4,7K	5%	1/4W
R588	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R632	1-216-097-00	METAL CHIP	100K	5%	1/10W
R633	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R634	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R635	1-216-085-00	METAL CHIP	33K	5%	1/10W
R636	1-216-113-00	METAL CHIP	470K	5%	1/10W
R637	1-216-073-00	METAL CHIP	10K	5%	1/10W
R638	1-216-049-00	METAL CHIP	1K	5%	1/10W
R639	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R642	1-216-081-00	METAL CHIP	22K	5%	1/10W
R643	1-216-081-00	METAL CHIP	22K	5%	1/10W
R644	1-216-097-00	METAL CHIP	100K	5%	1/10W
R682	1-216-097-00	METAL CHIP	100K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R683	1-216-069-00	METAL CHIP	6.8K	5% 1/10W	
R684	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R685	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R686	1-216-113-00	METAL CHIP	470K	5% 1/10W	
R687	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R688	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R689	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R690	1-216-081-00	METAL CHIP	22K	5% 1/10W	
R691	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
		< VARIABLE RESISTOR >			
RV631	1-223-606-11	RES, VAR, CARBON (DYNAMIC BASS SYSTEM LEVEL)			
RV632	1-223-606-11	RES, VAR, CARBON (DYNAMIC BASS SYSTEM FREQUENCY)			
		< SWITCH >			
S330	1-572-184-11	SWITCH, KEYBOARD (SYSTEM POWER)			
S331	1-572-184-11	SWITCH, KEYBOARD (KARAOKE PON)			
S332	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK, CIS) (PHONO)			
S332	1-572-184-11	SWITCH, KEYBOARD (E, EA, SP, MY, MX, AUS, JE) (TUNER)			
S333	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK, CIS) (TUNER)			
S333	1-572-184-11	SWITCH, KEYBOARD (E, EA, SP, MY, MX, AUS, JE) (CD)			
S334	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK, CIS) (CD)			
S334	1-572-184-11	SWITCH, KEYBOARD (E, EA, SP, MY, MX, AUS, JE) (MD/DAT)			
S335	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK, CIS) (MD/DAT/VIDEO)			
S335	1-572-184-11	SWITCH, KEYBOARD (E, EA, SP, MY, MX, AUS, JE) (TAPE)			
S336	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK, CIS) (TAPE)			
S336	1-572-184-11	SWITCH, KEYBOARD (E, EA, SP, MY, MX, AUS, JE) (VIDEO)			
S338	1-572-184-11	SWITCH, KEYBOARD (TUNER/BAND)			
S339	1-572-184-11	SWITCH, KEYBOARD (+)			
S340	1-572-184-11	SWITCH, KEYBOARD (-)			
S341	1-572-184-11	SWITCH, KEYBOARD (TUNING MODE)			
S342	1-572-184-11	SWITCH, KEYBOARD (MEMORY/NEXT)			
S343	1-572-184-11	SWITCH, KEYBOARD (DISPLAY)			
S344	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK) (EON)			
S345	1-572-184-11	SWITCH, KEYBOARD (AEP, G, IT, EE, UK) (PTY)			
S346	1-572-184-11	SWITCH, KEYBOARD (STERER/MONO)			
S347	1-572-184-11	SWITCH, KEYBOARD (CLOCK SET)			
S348	1-572-184-11	SWITCH, KEYBOARD (SLEEP)			
S349	1-572-184-11	SWITCH, KEYBOARD (REC TIMER)			
S350	1-572-184-11	SWITCH, KEYBOARD (DAILY)			
S351	1-572-184-11	SWITCH, KEYBOARD (ONCE)			
S352	1-572-184-11	SWITCH, KEYBOARD (TIMER SET)			
S353	1-572-184-11	SWITCH, KEYBOARD (◁)			
S354	1-572-184-11	SWITCH, KEYBOARD (▽)			
S355	1-572-184-11	SWITCH, KEYBOARD (▷)			
S356	1-572-184-11	SWITCH, KEYBOARD (△)			
S357	1-572-184-11	SWITCH, KEYBOARD (MODE ON)			
S358	1-572-184-11	SWITCH, KEYBOARD (MODE OFF)			
S359	1-572-184-11	SWITCH, KEYBOARD (EFFECT)			
S361	1-572-184-11	SWITCH, KEYBOARD (EQ MEMORY)			
		< VIBRATOR >			
X301	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X302	1-579-175-11	VIBRATOR, CERAMIC (10MHz)			
X501	1-577-358-21	VIBRATOR, SERAMIC (2MHz) (H3900)			
**********					
*	1-651-634-11	HP BOARD ********			
		< CONNECTOR >			
CN804	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		< JACK >			
J802	1-562-837-21	JACK (HEADPHONES)			
**********					
*	1-651-633-11	MIC BOARD *********			
		< CAPACITOR >			
C401	1-164-346-11	CERAMIC CHIP	1uF		16V
C402	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C403	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C407	1-126-301-11	ELECT	1uF	20%	50V
C408	1-124-589-11	ELECT	47uF	20%	16V
C409	1-124-589-11	ELECT	47uF	20%	16V
C410	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C411	1-164-346-11	CERAMIC CHIP	1uF		16V
C412	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< JACK >			
CNJ401	1-562-837-21	JACK (MIX MIC)			
		< CONNECTOR >			
CNP304	1-750-001-11	PIN, CONNECTOR (PC BOARD) 5P			
		< IC >			
IC401	8-759-636-55	IC M5218AFP			
		< RESISTOR >			
R402	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R403	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R404	1-216-045-00	METAL CHIP	680	5% 1/10W	
R405	1-216-105-00	METAL CHIP	220K	5% 1/10W	
R410	1-216-047-00	METAL CHIP	820	5% 1/10W	

MIC VOL INPUT

Ref.No.	Part No.	Description			Remark
R411	1-216-033-00	METAL CHIP	220	5% 1/10W	
R412	1-216-033-00	METAL CHIP	220	5% 1/10W	
		< VARIABLE RESISTOR >			
RV401	1-241-140-11	RES, VAR, CARBON 10K (MIC LEVEL)			
**********					
*	1-651-632-11	VOL BOARD			
		*********			
		< CAPACITOR >			
C558	1-124-120-11	ELECT	220uF	20% 25V	
C582	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
		< CONNECTOR >			
*CN305	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
*CNP303	1-695-894-11	PIN, CONNECTOR (PC BOARD) 11P			
		< DIODE >			
D551	8-719-016-74	DIODE 1SS352			
		< IC >			
IC310	8-759-184-40	IC LB1638			
		< RESISTOR >			
R501	1-216-093-91	METAL CHIP	68K	5% 1/10W	
R502	1-216-093-91	METAL CHIP	68K	5% 1/10W	
R570	1-216-295-91	METAL CHIP	0	5% 1/10W	
		< VARIABLE RESISTOR >			
RV180	1-223-607-11	RES, VAR, CARBON (WITH MOTOR) (VOLUME)			
**********					
*	A-4369-346-A	INPUT BOARD, COMPLETE(AEP)			
*	A-4369-374-A	INPUT BOARD, COMPLETE(E, EA, SP, MY, MX, AUS)			
*	A-4369-390-A	INPUT BOARD, COMPLETE(G, IT)			
*	A-4369-391-A	INPUT BOARD, COMPLETE(UK)			
*	A-4369-347-A	INPUT BOARD, COMPLETE(EE)			
*	A-4369-348-A	INPUT BOARD, COMPLETE(CIS)			
*	A-4369-381-A	INPUT BOARD, COMPLETE(JE)			
		**********			
		< CAPACITOR >			
C1	1-124-907-11	ELECT	10uF	20% 50V	
C2	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C3	1-162-294-31	CERAMIC	0.001uF	10% 50V (E, EA, SP, MY, MX, AUS, JE)	
C5	1-136-153-00	FILM	0.01uF	5% 50V	
C6	1-164-159-11	CERAMIC	0.1uF	50V (EXCEPT G, IT)	
C8	1-161-379-00	CERAMIC	0.01uF	20% 25V (AEP, EE, UK, CIS)	
C8	1-164-159-11	CERAMIC	0.1uF	50V (E, EA, SP, MY, MX, AUS, JE)	
C9	1-130-474-00	MYLAR	0.0018uF	5% 50V (AEP, EE, UK, CIS)	
C9	1-137-434-11	FILM	0.0018uF	5% 50V (AEP, EE, UK, CIS)	
C10	1-161-374-11	CERAMIC	0.0015uF	20% 50V (AEP, EE, UK, CIS)	
C12	1-136-162-00	FILM	0.056uF	5% 50V (E, EA, SP, MY, MX, AUS, JE)	
C14	1-162-195-31	CERAMIC	4.7PF	10% 50V (E, EA, SP, MY, MX, AUS, JE)	
C17	1-164-159-11	CERAMIC	0.1uF	50V (E, EA, SP, MY, MX, AUS, JE)	
C18	1-161-379-00	CERAMIC	0.01uF	20% 25V (JE)	
C21	1-164-056-11	CERAMIC	27PF	5% 50V	
C22	1-164-056-11	CERAMIC	27PF	5% 50V	
C23	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C24	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C25	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C26	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C27	1-124-907-11	ELECT	10uF	20% 50V	
C28	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C29	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C30	1-124-477-11	ELECT	47uF	20% 25V	
C31	1-124-925-11	ELECT	2.2uF	20% 100V	
C32	1-136-153-00	FILM	0.01uF	5% 50V	
C33	1-124-463-00	ELECT	0.1uF	20% 50V	
C34	1-124-902-00	ELECT	0.47uF	20% 50V (AEP, EE, UK, CIS)	
C35	1-136-157-00	FILM	0.022uF	5% 50V (AEP, EE, UK, CIS)	
C36	1-136-157-00	FILM	0.022uF	5% 50V (AEP, EE, UK, CIS)	
C36	1-164-095-11	CERAMIC	0.01uF	10% 16V (E, EA, SP, MY, MX, AUS, JE)	
C37	1-164-095-11	CERAMIC	0.01uF	10% 16V (E, EA, SP, MY, MX, AUS, JE)	
C38	1-164-095-11	CERAMIC	0.01uF	10% 16V (E, EA, SP, MY, MX, AUS, JE)	
C39	1-136-153-00	FILM	0.01uF	5% 50V (E, EA, SP, MY, MX, AUS, JE)	
C51	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C52	1-126-962-11	ELECT	3.3uF	20% 50V	
C53	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C54	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C55	1-162-211-31	CERAMIC	33PF	5% 50V (EXCEPT G, IT)	
C55	1-162-291-31	CERAMIC	560PF	10% 50V (G, IT)	

Ref.No.	Part No.	Description		Remark
C56	1-162-282-31	CERAMIC 100PF	10%	50V (G, IT)
C57	1-124-903-11	ELECT 1uF	20%	50V
C58	1-124-903-11	ELECT 1uF	20%	50V
C59	1-124-903-11	ELECT 1uF	20%	50V
C60	1-124-463-00	ELECT 0.1uF	20%	50V
C61	1-136-154-00	FILM 0.012uF	5%	50V
C62	1-136-154-00	FILM 0.012uF	5%	50V
C65	1-124-903-11	ELECT 1uF	20%	50V
C66	1-124-903-11	ELECT 1uF	20%	50V
C67	1-161-375-00	CERAMIC 0.0022uF	20%	50V
C68	1-161-375-00	CERAMIC 0.0022uF	20%	50V
C69	1-162-294-31	CERAMIC 0.001uF	10%	50V
C70	1-162-294-31	CERAMIC 0.001uF	10%	50V
C71	1-161-379-00	CERAMIC 0.01uF	20%	25V
C72	1-124-907-11	ELECT 10uF	20%	50V
C73	1-124-477-11	ELECT 47uF	20%	25V (EXCEPT CIS)
C73	1-124-910-11	ELECT 47uF	20%	50V (CIS)
C74	1-161-379-00	CERAMIC 0.01uF	20%	25V
C75	1-124-907-11	ELECT 10uF	20%	50V
C76	1-161-379-00	CERAMIC 0.01uF	20%	25V
C77	1-162-282-31	CERAMIC 100PF	10%	50V
C78	1-161-379-00	CERAMIC 0.01uF	20%	25V
C79	1-124-907-11	ELECT 10uF	20%	50V
C80	1-124-472-11	ELECT 470uF	20%	10V
C81	1-161-379-00	CERAMIC 0.01uF	20%	25V
C82	1-161-379-00	CERAMIC 0.01uF	20%	25V
C83	1-161-379-00	CERAMIC 0.01uF	20%	25V
C101	1-124-925-11	ELECT 2.2uF	20%	100V (AEP, G, IT, EE, UK, CIS)
C102	1-162-282-31	CERAMIC 100PF	10%	50V (AEP, G, IT, EE, UK, CIS)
C103	1-162-219-31	CERAMIC 68PF	5%	50V (AEP, G, IT, EE, UK, CIS)
C104	1-124-477-11	ELECT 47uF	20%	25V (AEP, G, IT, EE, UK, CIS)
C105	1-137-365-11	FILM 0.0015uF	5%	50V (AEP, G, IT, EE, UK, CIS)
C106	1-137-437-11	FILM 0.0056uF	5%	50V (AEP, G, IT, EE, UK, CIS)
C107	1-124-252-00	ELECT 0.33uF	20%	50V (AEP, G, IT, EE, UK, CIS)
C108	1-124-443-00	ELECT 100uF	20%	10V (AEP, G, IT, EE, UK, CIS)
C120	1-124-927-11	ELECT 4.7uF	20%	100V
C121	1-162-282-31	CERAMIC 100PF	10%	50V
C122	1-162-282-31	CERAMIC 100PF	10%	50V
C123	1-136-162-00	FILM 0.056uF	5%	50V
C124	1-162-293-31	CERAMIC 820PF	10%	50V
C151	1-124-925-11	ELECT 2.2uF	20%	100V (AEP, G, IT, EE, UK, CIS)

Ref.No.	Part No.	Description		Remark
C152	1-162-282-31	CERAMIC 100PF	10%	50V (AEP, G, IT, EE, UK, CIS)
C153	1-162-219-31	CERAMIC 68PF	5%	50V (AEP, G, IT, EE, UK, CIS)
C154	1-124-477-11	ELECT 47uF	20%	25V (AEP, G, IT, EE, UK, CIS)
C155	1-137-365-11	FILM 0.0015uF	5%	50V (AEP, G, IT, EE, UK, CIS)
C156	1-137-437-11	FILM 0.0056uF	5%	50V (AEP, G, IT, EE, UK, CIS)
C157	1-124-252-00	ELECT 0.33uF	20%	50V (AEP, G, IT, EE, UK, CIS)
C158	1-124-443-00	ELECT 100uF	20%	10V (AEP, G, IT, EE, UK, CIS)
C220	1-124-927-11	ELECT 4.7uF	20%	100V
C221	1-162-282-31	CERAMIC 100PF	10%	50V
C222	1-162-282-31	CERAMIC 100PF	10%	50V
C223	1-136-162-00	FILM 0.056uF	5%	50V
C224	1-162-293-31	CERAMIC 820PF	10%	50V
C501	1-162-286-31	CERAMIC 220PF	10%	50V
C502	1-162-286-31	CERAMIC 220PF	10%	50V
C503	1-162-286-31	CERAMIC 220PF	10%	50V
C507	1-124-916-11	ELECT 22uF	20%	63V
C551	1-162-286-31	CERAMIC 220PF	10%	50V
C552	1-162-286-31	CERAMIC 220PF	10%	50V
C553	1-162-286-31	CERAMIC 220PF	10%	50V
C703	1-164-096-11	CERAMIC 0.01uF		50V
C706	1-164-096-11	CERAMIC 0.01uF		50V (H3900:G, IT, /H2900:G, IT, E, CIS, EA, SP, MY, MX, AUS, JE)
C714	1-161-379-00	CERAMIC 0.01uF	20%	25V (G, IT)
C721	1-124-477-11	ELECT 47uF	20%	25V (AEP, G, IT, EE, UK)
C722	1-161-379-00	CERAMIC 0.01uF	20%	25V (AEP, G, IT, EE, UK)
C723	1-162-291-31	CERAMIC 560PF	10%	50V (AEP, G, IT, EE, UK)
C724	1-162-288-31	CERAMIC 330PF	10%	50V (AEP, G, IT, EE, UK)
C725	1-124-925-11	ELECT 2.2uF	20%	100V (AEP, G, IT, EE, UK)
C726	1-161-379-00	CERAMIC 0.01uF	20%	25V (AEP, G, IT, EE, UK)
C727	1-124-477-11	ELECT 47uF	20%	25V (AEP, G, IT, EE, UK)
C728	1-164-035-11	CERAMIC 47PF	5%	50V (AEP, G, IT, EE, UK)
C729	1-102-527-11	CERAMIC 82PF	5%	50V (AEP, G, IT, EE, UK)
C731	1-124-903-11	ELECT 1uF	20%	50V
C732	1-161-379-00	CERAMIC 0.01uF	20%	25V (AEP, G, IT, EE, UK)
C733	1-124-907-11	ELECT 10uF	20%	50V (AEP, G, IT, EE, UK)

INPUT

Ref.No.	Part No.	Description			Remark
C741	1-124-903-11	ELECT	1uF	20% 50V	
C742	1-124-477-11	ELECT	47uF	20% 25V	(AEP, G, IT, EE, UK)
C743	1-124-907-11	ELECT	10uF	20% 50V	(AEP, G, IT, EE, UK)
C751	1-161-379-00	CERAMIC	0.01uF	20% 25V	(AEP, G, IT, EE, UK)
		< FILTER >			
CF1	1-579-374-71	FILTER, CERAMIC	10.7MHz		
CF2	1-579-374-71	FILTER, CERAMIC	10.7MHz		(G, IT)
CF51	1-579-374-71	FILTER, CERAMIC	10.7MHz		
		< CONNECTOR >			
*CN31	1-568-832-11	SOCKET, CONNECTOR	13P		(CIS)
CN100	1-568-846-11	SOCKET, CONNECTOR	32P		
*CN101	1-569-624-11	SOCKET, CONNECTOR	17P		
*CN102	1-565-561-11	PIN, CONNECTOR	3P		
*CN302	1-568-824-11	SOCKET, CONNECTOR	5P		(AEP, G, IT, EE, UK)
*CNP101	1-695-894-11	PIN, CONNECTOR (PC BOARD)	11P		
*CNP102	1-695-894-11	PIN, CONNECTOR (PC BOARD)	11P		
		< VARIABLE CAPACITOR >			
CV1	1-141-227-00	CAP, TRIMMER	20PF		(E, EA, SP, MY, MX, AUS, JE)
CV2	1-141-227-00	CAP, TRIMMER	20PF		(E, EA, SP, MY, MX, AUS, JE)
		< DIODE >			
D1	8-719-976-30	DIODE	KV1560N		(E, EA, SP, MY, MX, AUS, JE)
D51	8-719-987-63	DIODE	1N4148M		(AEP, G, IT, EE, UK)
D81	8-719-987-63	DIODE	1N4148M		(CIS)
D82	8-719-987-63	DIODE	1N4148M		(E, EA, SP, MY, MX, AUS, JE)
D101	8-719-987-63	DIODE	1N4148M		
D102	8-719-987-63	DIODE	1N4148M		
D201	8-719-987-63	DIODE	1N4148M		
D202	8-719-987-63	DIODE	1N4148M		
		< FRONTEND >			
FE1	1-465-396-11	FRONT END (3 GANG)			(EE, CIS)
FE1	1-465-007-11	FRONT END (4 GANG)			(G, IT)
FE1	1-465-673-11	FRONT END (2 BAND)			(AEP, UK, E, EA, SP, MY, MX, AUS)
FE1	1-693-216-11	FRONT END			(JE)
FE2	1-236-777-11	ENCAPSULATED COMPONENT			(E, EA, SP, MY, MX, AUS, JE)
FE2	1-236-461-11	ENCAPSULATED COMPONENT			(G, IT)
FE2	1-236-462-11	ENCAPSULATED COMPONENT			(AEP, EE, UK, CIS)
FE3	1-236-463-11	ENCAPSULATED COMPONENT			(AEP, EE, UK, CIS)
FL51	1-236-465-11	ENCAPSULATED COMPONENT			(G, IT)

Ref.No.	Part No.	Description		Remark
		< IC >		
IC21	8-759-175-87	IC	LC7218-ST	
IC51	8-759-821-45	IC	LA1851N	
IC54	8-759-145-58	IC	uPC4558C	(AEP, G, IT, EE, UK)
IC72	8-759-169-99	IC	SAA6579	(AEP, G, IT, EE, UK)
IC73	8-759-062-26	IC	LC7073	(AEP, G, IT, EE, UK)
IC101	8-759-634-51	IC	M5218AP	(AEP, G, IT, EE, UK, CIS)
IC103	8-759-000-47	IC	MC14051BCP	
IC120	8-759-000-49	IC	MC14066BCP	
IC125	8-759-634-51	IC	M5218AP	
IC153	8-759-000-47	IC	MC14051BCP	
		< IFT >		
IFT51	1-404-807-11	TRANSFORMER, DISCRIMINATOR		
IFT52	1-404-853-11	TRANSFORMER, IF(CERAMIC FILTER)		
		< JACK >		
J100	1-565-320-61	JACK, PIN 6P		(AEP, G, IT, EE, UK, CIS) (PHONO, MD/VIDEO/DAT IN, MD/VIDEO/DAT OUT)
J100	1-565-320-61	JACK, PIN 6P		(E, EA, SP, MY, MX, AUS, JE) (VIDEO, MD/DAT IN, MD/DAT OUT)
		< COIL >		
L1	1-408-425-00	INDUCTOR	220uH	(AEP, EE, UK, CIS)
L51	1-410-496-11	INDUCTOR	1.5mH	
L83	1-410-489-11	INDUCTOR	390uH	
L711	1-410-525-11	INDUCTOR	220uH	(G, IT)
L712	1-410-525-11	INDUCTOR	220uH	(G, IT)
		< FILTER >		
LPF51	1-235-164-00	FILTER, LOW PASS		
LPF52	1-235-164-00	FILTER, LOW PASS		
		< TRANSISTOR >		
Q1	8-729-230-99	TRANSISTOR	2SC2669OY-TPE4	
Q2	8-729-900-80	TRANSISTOR	DTC114ES	(EXCEPT G, IT)
Q3	8-729-900-61	TRANSISTOR	DTA114ES	
Q4	8-729-119-76	TRANSISTOR	2SA1175-HFE	(EXCEPT G, IT)
Q5	8-729-900-80	TRANSISTOR	DTC114ES	(EXCEPT G, IT)
Q6	8-729-119-76	TRANSISTOR	2SA1175-HFE	(EXCEPT G, IT)
Q7	8-729-900-80	TRANSISTOR	DTC114ES	(EXCEPT G, IT)
Q8	8-729-900-80	TRANSISTOR	DTC114ES	(EXCEPT G, IT)
Q22	8-729-202-67	TRANSISTOR	2SK246-GR3	
Q23	8-729-201-84	TRANSISTOR	2SC3112-B	
Q24	8-729-202-67	TRANSISTOR	2SK246-GR3	(AEP, EE, UK, CIS)
Q25	8-729-201-84	TRANSISTOR	2SC3112-B	(AEP, EE, UK, CIS)
Q51	8-729-119-78	TRANSISTOR	2SC2785	
Q52	8-729-119-78	TRANSISTOR	2SC2785	
Q53	8-729-900-80	TRANSISTOR	DTC114ES	

Ref.No.	Part No.	Description	Remark
Q54	8-729-900-80	TRANSISTOR DTC114ES (CIS)	
Q55	8-729-900-80	TRANSISTOR DTC114ES (CIS)	
Q120	8-729-900-63	TRANSISTOR DTA124ES	
Q121	8-729-900-63	TRANSISTOR DTA124ES	
Q122	8-729-900-80	TRANSISTOR DTC114ES	
Q123	8-729-900-80	TRANSISTOR DTC114ES	
Q124	8-729-900-80	TRANSISTOR DTC114ES	
Q742	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4 (G, IT)	
		< RESISTOR >	
R1	1-249-411-11	CARBON 330 5% 1/4W	
R2	1-249-411-11	CARBON 330 5% 1/4W	
R3	1-247-891-00	CARBON 330K 5% 1/4W	
R4	1-249-411-11	CARBON 330 5% 1/4W	
R5	1-247-891-00	CARBON 330K 5% 1/4W (G, IT)	
R6	1-249-411-11	CARBON 330 5% 1/4W (G, IT)	
R7	1-247-807-31	CARBON 100 5% 1/4W	
R8	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R9	1-249-437-11	CARBON 47K 5% 1/4W	
R10	1-249-441-11	CARBON 100K 5% 1/4W	
R11	1-249-425-11	CARBON 4.7K 5% 1/4W (EXCEPT G, IT)	
R12	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R13	1-249-437-11	CARBON 47K 5% 1/4W (AEP, EE, UK, CIS)	
R13	1-247-903-00	CARBON 1M 5% 1/4W (E, EA, SP, MY, MX, AUS, JE)	
R14	1-249-429-11	CARBON 10K 5% 1/4W (E, EA, SP, MY, MX, AUS, JE)	
R14	1-249-433-11	CARBON 22K 5% 1/4W (AEP, EE, UK, CIS)	
R15	1-247-903-00	CARBON 1M 5% 1/4W (AEP, EE, UK, CIS)	
R16	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R19	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R20	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT, CIS)	
R21	1-249-417-11	CARBON 1K 5% 1/4W	
R22	1-249-417-11	CARBON 1K 5% 1/4W	
R23	1-249-417-11	CARBON 1K 5% 1/4W	
R24	1-247-807-31	CARBON 100 5% 1/4W	
R25	1-249-425-11	CARBON 4.7K 5% 1/4W	
R26	1-249-417-11	CARBON 1K 5% 1/4W	
R27	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R28	1-247-807-31	CARBON 100 5% 1/4W	
R29	1-247-807-31	CARBON 100 5% 1/4W	
R30	1-249-423-11	CARBON 3.3K 5% 1/4W	
R31	1-249-414-11	CARBON 560 5% 1/4W	
R32	1-249-417-11	CARBON 1K 5% 1/4W	
R33	1-249-410-11	CARBON 270 5% 1/4W	
R34	1-249-425-11	CARBON 4.7K 5% 1/4W	
R35	1-249-421-11	CARBON 2.2K 5% 1/4W	
R36	1-249-425-11	CARBON 4.7K 5% 1/4W	
R37	1-249-425-11	CARBON 4.7K 5% 1/4W	
R38	1-247-807-31	CARBON 100 5% 1/4W	
R39	1-249-423-11	CARBON 3.3K 5% 1/4W (AEP, EE, UK, CIS)	
R40	1-249-414-11	CARBON 560 5% 1/4W (AEP, EE, UK, CIS)	
R41	1-249-417-11	CARBON 1K 5% 1/4W (AEP, EE, UK, CIS)	
R42	1-249-410-11	CARBON 270 5% 1/4W (AEP, EE, UK, CIS)	
R43	1-249-433-11	CARBON 22K 5% 1/4W (AEP, EE, UK, CIS)	
R44	1-249-421-11	CARBON 2.2K 5% 1/4W (AEP, EE, UK, CIS)	
R44	1-249-421-11	CARBON 2.2K 5% 1/4W (AEP, EE, UK, CIS)	
R45	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, EE, UK, CIS)	
R46	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, EE, UK, CIS)	
R51	1-249-417-11	CARBON 1K 5% 1/4W	
R52	1-249-433-11	CARBON 22K 5% 1/4W	
R53	1-249-435-11	CARBON 33K 5% 1/4W	
R54	1-249-428-11	CARBON 8.2K 5% 1/4W	
R55	1-249-430-11	CARBON 12K 5% 1/4W	
R57	1-249-429-11	CARBON 10K 5% 1/4W (AEP, G, IT, EE, UK)	
R58	1-247-848-11	CARBON 5.1K 5% 1/4W	
R59	1-249-425-11	CARBON 4.7K 5% 1/4W	
R60	1-249-425-11	CARBON 4.7K 5% 1/4W	
R61	1-247-891-00	CARBON 330K 5% 1/4W	
R62	1-247-891-00	CARBON 330K 5% 1/4W	
R63	1-247-836-11	CARBON 1.6K 5% 1/4W	
R64	1-247-836-11	CARBON 1.6K 5% 1/4W	
R65	1-249-429-11	CARBON 10K 5% 1/4W	
R66	1-249-429-11	CARBON 10K 5% 1/4W	
R67	1-249-421-11	CARBON 2.2K 5% 1/4W	
R68	1-249-421-11	CARBON 2.2K 5% 1/4W	
R69	1-249-404-00	CARBON 82 5% 1/4W	
R70	1-249-409-11	CARBON 220 5% 1/4W	
R71	1-249-437-11	CARBON 47K 5% 1/4W	
R72	1-249-429-11	CARBON 10K 5% 1/4W	
R73	1-249-429-11	CARBON 10K 5% 1/4W	
R74	1-249-399-11	CARBON 33 5% 1/4W	
R79	1-249-417-11	CARBON 1K 5% 1/4W	
R80	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R81	1-249-429-11	CARBON 10K 5% 1/4W (EXCEPT G, IT)	
R82	1-249-429-11	CARBON 10K 5% 1/4W (CIS)	
R83	1-249-429-11	CARBON 10K 5% 1/4W (E, EA, SP, MY, MX, AUS, JE)	
R101	1-249-417-11	CARBON 1K 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R102	1-249-437-11	CARBON 47K 5% 1/4W	
R103	1-247-897-11	CARBON 560K 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R104	1-249-416-11	CARBON 820 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R105	1-249-437-11	CARBON 47K 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R106	1-247-897-11	CARBON 560K 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R107	1-249-441-11	CARBON 100K 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R108	1-249-409-11	CARBON 220 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R109	1-249-409-11	CARBON 220 5% 1/4W(AEP, G, IT, EE, UK, CIS)	
R113	1-249-425-11	CARBON 4.7K 5% 1/4W	

INPUT AMP

Ref.No.	Part No.	Description	Remark
R114	1-247-850-11	CARBON 6.2K 5% 1/4W	
R115	1-249-411-11	CARBON 330 5% 1/4W	
R116	1-249-429-11	CARBON 10K 5% 1/4W	
R120	1-249-433-11	CARBON 22K 5% 1/4W	
R121	1-249-433-11	CARBON 22K 5% 1/4W	
R122	1-249-433-11	CARBON 22K 5% 1/4W	
R123	1-249-433-11	CARBON 22K 5% 1/4W	
R124	1-249-433-11	CARBON 22K 5% 1/4W	
R125	1-249-433-11	CARBON 22K 5% 1/4W	
R151	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R152	1-249-437-11	CARBON 47K 5% 1/4W	
R153	1-247-897-11	CARBON 560K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R154	1-249-416-11	CARBON 820 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R155	1-249-437-11	CARBON 47K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R156	1-247-897-11	CARBON 560K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R157	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R158	1-249-409-11	CARBON 220 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R159	1-249-409-11	CARBON 220 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R213	1-249-425-11	CARBON 4.7K 5% 1/4W	
R214	1-247-850-11	CARBON 6.2K 5% 1/4W	
R215	1-249-411-11	CARBON 330 5% 1/4W	
R216	1-249-429-11	CARBON 10K 5% 1/4W	
R220	1-249-433-11	CARBON 22K 5% 1/4W	
R221	1-249-433-11	CARBON 22K 5% 1/4W	
R222	1-249-433-11	CARBON 22K 5% 1/4W	
R225	1-249-433-11	CARBON 22K 5% 1/4W	
R230	1-249-429-11	CARBON 10K 5% 1/4W	
R501	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R501	1-249-422-11	CARBON 2.7K 5% 1/4W F	(E, EA, SP, MY, MX, AUS, JE)
R551	1-249-422-11	CARBON 2.7K 5% 1/4W F	(E, EA, SP, MY, MX, AUS, JE)
R551	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R703	1-249-409-11	CARBON 220K 5% 1/4W	(AEP, G, IT, EE, UK, CIS)
R711	1-247-807-31	CARBON 100K 5% 1/4W	(G, IT)
R721	1-249-421-11	CARBON 2.2K 5% 1/4W	(AEP, G, IT, EE, UK)
R731	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, G, IT, EE, UK)
R732	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, G, IT, EE, UK)
R733	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, G, IT, EE, UK)
R734	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, G, IT, EE, UK)
R741	1-247-807-31	CARBON 100 5% 1/4W	(AEP, G, IT, EE, UK)
R742	1-249-426-11	CARBON 5.6K 5% 1/4W	(AEP, G, IT, EE, UK)
R743	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, G, IT, EE, UK)
R744	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, G, IT, EE, UK)
R745	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, G, IT, EE, UK)
R746	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, G, IT, EE, UK)
R747	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, G, IT, EE, UK)
R751	1-249-417-11	CARBON 1K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV51	1-238-601-11	RES, ADJ, CARBON 22K	
RV52	1-238-601-11	RES, ADJ, CARBON 22K	
		< TRANSFORMER >	
T1	1-402-424-11	COIL (ANT, SW3)	(E, EA, SP, MY, MX, AUS, JE)
T2	1-406-346-11	COIL (OSC, SW3)	(E, EA, SP, MY, MX, AUS, JE)
		< TERMINAL >	
TB101	1-537-238-21	TERMINAL BOARD	(E, EA, SP, MY, MX, AUS, JE)
TB101	1-537-488-11	TERMINAL BOARD (ANTENNA)	(AEP, G, IT, EE, UK, CIS)
		< CONNECTOR >	
*TP51	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P	
		< VIBRATOR >	
X21	1-577-126-21	VIBRATOR, CRYSTAL (7.2MHz)	
X51	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)	
X72	1-579-242-11	VIBRATOR, CRYSTAL (4.332MHz)	(AEP, G, IT, EE, UK)
X73	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	(AEP, G, IT, EE, UK)
**********			
*	A-4369-331-A	AMP BOARD, COMPLETE (H3900:AEP)	
*	A-4369-350-A	AMP BOARD, COMPLETE (H2900:AEP, EE, CIS)	
*	A-4369-362-A	AMP BOARD, COMPLETE (H3900:G, IT)	
*	A-4369-403-A	AMP BOARD, COMPLETE (H2900:G, IT)	
*	A-4369-404-A	AMP BOARD, COMPLETE (UK)	
*	A-4371-008-A	AMP BOARD, COMPLETE	(E, EA, SP, MY, MX, AUS, JE)
		**********	
*	3-309-144-21	HEAT SINK	
*	4-942-204-01	PLATE, GROUND	
	7-682-547-09	SCREW +BVTT 3X6 (S)	
		< CAPACITOR >	
C800	1-124-903-11	ELECT 1uF 20% 50V	
C801	1-124-903-11	ELECT 1uF 20% 50V	
C802	1-162-290-31	CERAMIC 470PF 10% 50V	
C803	1-162-290-31	CERAMIC 470PF 10% 50V	
C804	1-162-282-31	CERAMIC 100PF 10% 50V	
C805	1-162-282-31	CERAMIC 100PF 10% 50V	
C806	1-124-910-11	ELECT 47uF 20% 50V	
C807	1-124-910-11	ELECT 47uF 20% 50V	
C808	1-124-910-11	ELECT 47uF 20% 50V	
C809	1-124-910-11	ELECT 47uF 20% 50V	
C810	1-136-165-00	FILM 0.1uF 5% 50V	
C811	1-136-165-00	FILM 0.1uF 5% 50V	
C812	1-136-165-00	FILM 0.1uF 5% 50V	

AMP

Ref.No.	Part No.	Description			Remark
C813	1-136-165-00	FILM	0.1uF	5% 50V	
C814	1-124-916-11	ELECT	22uF	20% 63V	
C815	1-136-165-00	FILM	0.1uF	5% 50V (G, IT)	
C816	1-136-165-00	FILM	0.1uF	5% 50V (G, IT)	
C817	1-136-165-00	FILM	0.1uF	5% 50V (G, IT)	
C818	1-136-165-00	FILM	0.1uF	5% 50V (G, IT)	
C821	1-136-161-00	FILM	0.047uF	5% 50V	
C822	1-124-917-11	ELECT	33uF	20% 63V	
C823	1-124-917-11	ELECT	33uF	20% 63V	
C830	1-124-910-11	ELECT	47uF	20% 50V	
C851	1-124-916-11	ELECT	22uF	20% 63V	
C852	1-124-925-11	ELECT	2.2uF	20% 100V	
C853	1-124-907-11	ELECT	10uF	20% 50V	
C854	1-126-176-11	ELECT	220uF	20% 10V	
C870	1-124-927-11	ELECT	4.7uF	20% 100V (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
C901	1-104-482-11	ELECT	4700uF	20% 63V (H3900)	
C901	1-126-138-11	ELECT	4700uF	20% 50V (H2900)	
C902	1-104-482-11	ELECT	4700uF	20% 63V (H3900)	
C902	1-126-138-11	ELECT	4700uF	20% 50V (H2900)	
C905	1-124-907-11	ELECT	10uF	20% 50V	
C906	1-124-898-11	ELECT	4700uF	20% 16V	
C907	1-124-898-11	ELECT	4700uF	20% 16V	
C908	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C909	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C911	1-124-925-11	ELECT	2.2uF	20% 100V	
C912	1-124-472-11	ELECT	470uF	20% 10V	
C913	1-124-472-11	ELECT	470uF	20% 10V	
C914	1-126-101-11	ELECT	100uF	20% 16V	
C915	1-124-477-11	ELECT	47uF	20% 25V	
C916	1-124-907-11	ELECT	10uF	20% 50V	
C917	1-124-477-11	ELECT	47uF	20% 25V	
C919	1-161-494-00	CERAMIC	0.022uF	25V	
C920	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C925	1-124-918-11	ELECT	47uF	20% 63V (H2900)	
C927	1-123-605-00	ELECT	100uF	20% 100V	
C928	1-124-910-11	ELECT	47uF	20% 50V	
C929	1-124-910-11	ELECT	47uF	20% 50V	
C930	1-124-122-11	ELECT	100uF	20% 50V	
C931	1-124-557-11	ELECT	1000uF	20% 25V	
C932	1-124-122-11	ELECT	100uF	20% 50V	

< CONNECTOR >

*CN801	1-695-893-11	HOUSING, CONNECTOR (PC BOARD) 11P	
*CN802	1-695-893-11	HOUSING, CONNECTOR (PC BOARD) 11P	
*CN803	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
*CN805	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CN851	1-764-833-11	PLUG, CONNECTOR (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
CN873	1-569-490-11	SOCKET, CONNECTOR 3P (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
*CN901	1-764-802-11	HOUSING, CONNECTOR (PCB) 12P	

< DIODE >

D801	8-719-987-63	DIODE	1N4148M
D802	8-719-987-63	DIODE	1N4148M
D803	8-719-987-63	DIODE	1N4148M
D860	8-719-987-63	DIODE	1N4148M
D861	8-719-987-63	DIODE	1N4148M
D870	8-719-815-85	DIODE	1S1585 (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
D871	8-719-815-85	DIODE	1S1585 (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
D901	8-719-987-63	DIODE	1N4148M
D902	8-719-987-63	DIODE	1N4148M
D903	8-719-200-82	DIODE	11ES2
D904	8-719-200-82	DIODE	11ES2
D905	8-719-200-82	DIODE	11ES2
D906	8-719-200-82	DIODE	11ES2
D907	8-719-001-67	DIODE	UZL-12L3
D908	8-719-933-40	DIODE	HZS6C2L
D909	8-719-987-63	DIODE	1N4148M
D911	8-719-302-38	DIODE	RBV-602-01
D912	8-719-987-63	DIODE	1N4148M
D913	8-719-200-82	DIODE	11ES2 (H2900)
D914	8-719-200-82	DIODE	11ES2
D915	8-719-934-23	DIODE	HZS30-3L
D916	8-719-200-82	DIODE	11ES2
D917	8-719-200-82	DIODE	11ES2
D918	8-719-200-82	DIODE	11ES2
D919	8-719-200-82	DIODE	11ES2

< IC >

IC801	8-749-900-34	IC	STK-4182MK2 (H3900)
IC801	8-749-920-09	IC	STK-4152MK2K (H2900)
IC802	8-759-111-68	IC	uPC1237HA
IC901	8-759-602-66	IC	M5230L-A

< TRANSISTOR >

Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q802	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q803	8-729-119-78	TRANSISTOR	2SC2785
Q804	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q816	8-729-119-78	TRANSISTOR	2SC2785 (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
Q817	8-729-118-00	TRANSISTOR	2SB1116-L (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
Q850	8-729-900-63	TRANSISTOR	DTA124ES
Q851	8-729-119-78	TRANSISTOR	2SC2785

AMP

Ref.No.	Part No.	Description	Remark
Q901	8-729-900-80	TRANSISTOR DTC114ES	
Q902	8-729-119-78	TRANSISTOR 2SC2785	
Q903	8-729-209-15	TRANSISTOR 2SD2012	
Q904	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q905	8-729-119-78	TRANSISTOR 2SC2785	
Q906	8-729-119-76	TRANSISTOR 2SA1175	
Q907	8-729-209-15	TRANSISTOR 2SD2012	
Q908	8-729-209-15	TRANSISTOR 2SD2012	
Q915	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R800	1-249-438-11	CARBON 56K 5% 1/4W	
R801	1-249-438-11	CARBON 56K 5% 1/4W	
R802	1-249-415-11	CARBON 680 5% 1/4W	(H3900)
R802	1-249-416-11	CARBON 820 5% 1/4W	(H2900)
R803	1-249-415-11	CARBON 680 5% 1/4W	(H3900)
R803	1-249-416-11	CARBON 820 5% 1/4W	(H2900)
R804	1-249-438-11	CARBON 56K 5% 1/4W	
R805	1-249-438-11	CARBON 56K 5% 1/4W	
R806	1-247-719-11	CARBON 3.3K 5% 1/4W	(H3900)
R806	1-247-717-11	CARBON 2.2K 5% 1/4W	(H2900)
R807	1-247-717-11	CARBON 2.2K 5% 1/4W	(H2900)
R807	1-247-719-11	CARBON 3.3K 5% 1/4W	(H3900)
R808	1-247-717-11	CARBON 2.2K 5% 1/4W	(H2900)
R808	1-247-719-11	CARBON 3.3K 5% 1/4W	(H3900)
R809	1-247-717-11	CARBON 2.2K 5% 1/4W	(H2900)
R809	1-247-719-11	CARBON 3.3K 5% 1/4W	(H3900)
R810	1-249-417-11	CARBON 1K 5% 1/4W	
R811	1-249-417-11	CARBON 1K 5% 1/4W	
R812	1-249-431-11	CARBON 15K 5% 1/4W	
R813	1-249-431-11	CARBON 15K 5% 1/4W	
R814	1-249-441-11	CARBON 100K 5% 1/4W	
R815	1-249-441-11	CARBON 100K 5% 1/4W	
⚠R816	1-217-151-00	RES, METAL PLATE 0.22	
⚠R817	1-217-151-00	RES, METAL PLATE 0.22	
R818	1-247-688-11	CARBON 10 5% 1/4W	
R819	1-247-688-11	CARBON 10 5% 1/4W	
R820	1-249-438-11	CARBON 56K 5% 1/4W	
R821	1-249-437-11	CARBON 47K 5% 1/4W	
⚠R822	1-217-641-00	FUSIBLE 4.7 5% 1/2W F	
⚠R823	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R824	1-247-713-11	CARBON 1K 5% 1/4W	
R825	1-247-713-11	CARBON 1K 5% 1/4W	
R826	1-249-437-11	CARBON 47K 5% 1/4W	
R827	1-249-438-11	CARBON 56K 5% 1/4W	
R828	1-249-434-11	CARBON 27K 5% 1/4W	
R829	1-249-433-11	CARBON 22K 5% 1/4W	
⚠R831	1-212-881-11	FUSIBLE 100 5% 1/4W F	
⚠R832	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R833	1-249-438-11	CARBON 56K 5% 1/4W	
R834	1-249-438-11	CARBON 56K 5% 1/4W	
R835	1-249-438-11	CARBON 56K 5% 1/4W	
R836	1-249-438-11	CARBON 56K 5% 1/4W	
R837	1-247-688-11	CARBON 10 5% 1/4W	(G, IT)
R838	1-247-688-11	CARBON 10 5% 1/4W	(G, IT)
R840	1-249-417-11	CARBON 1K 5% 1/4W	
R841	1-249-417-11	CARBON 1K 5% 1/4W	
R842	1-249-417-11	CARBON 1K 5% 1/4W	
R843	1-249-417-11	CARBON 1K 5% 1/4W	
R851	1-249-422-11	CARBON 2.7K 5% 1/4W	
R852	1-249-439-11	CARBON 68K 5% 1/4W	
R853	1-249-429-11	CARBON 10K 5% 1/4W	
R855	1-249-433-11	CARBON 22K 5% 1/4W	
R856	1-249-441-11	CARBON 100K 5% 1/4W	
R859	1-249-433-11	CARBON 22K 5% 1/4W	
⚠R860	1-219-199-91	FUSIBLE 680 5% 1/2W F	(H2900)
⚠R860	1-219-201-91	FUSIBLE 1K 5% 1/2W F	(H3900)
R861	1-249-429-11	CARBON 10K 5% 1/4W	
R870	1-249-435-11	CARBON 33K 5% 1/4W	(H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
R871	1-249-435-11	CARBON 33K 5% 1/4W	(H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
R873	1-249-429-11	CARBON 10K 5% 1/4W	(H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
R874	1-249-425-11	CARBON 4.7K 5% 1/4W	(H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
R875	1-249-429-11	CARBON 10K 5% 1/4W	(H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
R876	1-249-441-11	CARBON 100K 5% 1/4W	(H3900/H2900:E, EA, SP, MY, MX, AUS, JE)
R901	1-249-421-11	CARBON 2.2K 5% 1/4W	
R903	1-249-429-11	CARBON 10K 5% 1/4W	
R904	1-249-429-11	CARBON 10K 5% 1/4W	
R905	1-247-903-00	CARBON 1M 5% 1/4W	
R906	1-249-409-11	CARBON 220 5% 1/4W	
R907	1-249-409-11	CARBON 220 5% 1/4W	
R908	1-249-414-11	CARBON 560 5% 1/4W	
R909	1-249-414-11	CARBON 560 5% 1/4W	
R910	1-249-431-11	CARBON 15K 5% 1/4W	
R911	1-249-431-11	CARBON 15K 5% 1/4W	
R912	1-249-429-11	CARBON 10K 5% 1/4W	
R913	1-249-423-11	CARBON 3.3K 5% 1/4W	
⚠R914	1-219-139-11	FUSIBLE 0.68 10% 1/4W	
R915	1-249-420-11	CARBON 1.8K 5% 1/4W	
R917	1-249-413-11	CARBON 470 5% 1/4W	
R918	1-249-417-11	CARBON 1K 5% 1/4W	
R919	1-249-417-11	CARBON 1K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark
⚠R920	1-219-139-11	FUSIBLE 0.68 10% 1/4W	
⚠R921	1-219-139-11	FUSIBLE 0.68 10% 1/4W	
⚠R923	1-219-139-11	FUSIBLE 0.68 10% 1/4W	
R924	1-249-423-11	CARBON 3.3K 5% 1/4W	
R925	1-249-406-11	CARBON 120 5% 1/4W	
		< RELAY >	
RY801	1-515-533-11	RELAY	
		< TERMINAL >	
TB870	1-537-240-11	TERMINAL BOARD (CHECKER PIN) (SPEAKER IMPEDANCE USE 6-16 Ω)	
**********			
*	1-651-639-11	FUSE BOARD (H2900) **********	
*	1-533-213-31	HOLDER, FUSE	
		< CONNECTOR >	
CN853	1-564-517-11	PLUG, CONNECTOR 2P (E, EA, SP, MY, MX, AUS, JE)	
CN903	1-750-262-11	HOUSING CONNECTOR (PC BOARD) 11P (H2900)	
CNP902	1-695-998-11	PIN, CONNECTOR 12P	
		< FUSE >	
⚠F903	1-532-286-00	FUSE, TIME-LAG 2.5A 250V	
⚠F904	1-532-286-00	FUSE, TIME-LAG 2.5A 250V	
⚠F905	1-532-299-00	FUSE, TIME-LAG 5A 250V	
⚠F906	1-532-299-00	FUSE, TIME-LAG 5A 250V	
		< IC LINK >	
⚠PS901	1-532-837-21	IC LINK (E, EA, SP, MY, MX, AUS, JE)	
**********			
*	1-651-640-11	FUSE BOARD (H3900) **********	
*	1-533-213-31	HOLDER, FUSE	
		< CONNECTOR >	
CN852	1-564-517-11	PLUG, CONNECTOR 2P (H3900)	
CN902	1-750-262-11	HOUSING, CONNECTOR (PC BOARD) 11P	
CNP903	1-695-998-11	PIN, CONNECTOR 12P	
		< FUSE >	
⚠F903	1-532-286-00	FUSE, TIME-LAG 2.5A 250V	
⚠F904	1-532-286-00	FUSE, TIME-LAG 2.5A 250V	
⚠F905	1-532-506-51	FUSE, TIME-LAG 6.3A 250V	
⚠F906	1-532-506-51	FUSE, TIME-LAG 6.3A 250V	
		< IC LINK >	
⚠PS901	1-532-837-21	IC LINK(E, EA, SP, MY, MX, AUS, JE)	
**********			

Ref.No.	Part No.	Description	Remark
*	1-653-235-11	INLET BOARD **********	
*	1-533-213-31	HOLDER, FUSE	
		< CONNECTOR >	
⚠CN911	1-526-931-11	INLET, AC (~ AC IN)	(AEP, G, IT, EE, UK, CIS, EA, SP, MY, AUS)
⚠CN911	1-526-930-11	INLET, AC (E, MX, JE)	
		< FUSE >	
⚠F901	1-532-078-00	FUSE, TIME-LAG 1A 250V	(H2900:AEP, G, IT, EE, UK, CIS)
⚠F901	1-532-215-00	FUSE, TIME-LAG 800mA 250V	(E, EA, SP, MY, MX, AUS, JE)
⚠F901	1-532-259-00	FUSE, TIME-LAG 1.6A 250V	(H3900)
⚠F902	1-532-259-00	FUSE, TIME-LAG 1.6A 250V	(E, EA, SP, MY, MX, AUS, JE)
		< LINE FILTER >	
⚠LF901	1-424-485-11	FILTER (G, IT)	
		< SWITCH >	
⚠S901	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (E, EA, SP, MY, MX, AUS, JE)	
**********			
*	1-651-642-11	SENSOR BOARD (H3900/H2900:E, EA, SP, MY, MX, AUS, JE) **********	
		< CAPACITOR >	
C855	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
CN854	1-764-832-11	SOCKET, CONNECTOR	
		< DIODE >	
D851	8-719-210-21	DIODE 11EQS04	
		< IC >	
IC851	8-759-947-34	IC LM35DZ	
		< RESISTOR >	
R857	1-249-421-11	CARBON 2.2K 5% 1/4W	
R858	1-249-441-11	CARBON 100K 5% 1/4W	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SURROUND TRANSFORMER POLAR

Ref.No.	Part No.	Description	Remark
*	1-651-641-11	SURROUND BOARD (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)	
		**********	
		< CONNECTOR >	
*CN872	1-569-499-11	PIN, CONNECTOR 3P	
		< JACK >	
PJ801	1-750-178-11	JACK, PIN 2P (SURROUND SPEAKER IMPEDANSE USE 8-16 Ω)	
**********			
*	1-651-638-11	TRANSFORMER BOARD	
		**********	
		< CONNECTOR >	
*CNP904	1-695-894-11	PIN, CONNECTOR 11P	
		< TRANSFORMER >	
⚠T901	1-426-653-11	TRANSFORMER, POWER (E, EA, SP, MY, MX, AUS, JE)	
⚠T901	1-426-654-11	TRANSFORMER, POWER (H2900:AEP, G, IT, EE, CIS)	
⚠T901	1-426-655-11	TRANSFORMER, POWER (H3900:AEP, G, IT)	
⚠T901	1-426-739-11	TRANSFORMER, POWER (UK)	
**********			
*	A-4369-349-A	POLAR BOARD, COMPLETE (CIS)	
		**********	
		< CAPACITOR >	
C1701	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1702	1-130-014-00	FILM 470PF 5% 50V	
C1703	1-124-902-00	ELECT 0.47uF 20% 50V	
C1704	1-124-902-00	ELECT 0.47uF 20% 50V	
C1705	1-164-098-11	CERAMIC 0.047uF 12V	
C1706	1-124-903-11	ELECT 1uF 20% 50V	
C1707	1-162-288-31	CERAMIC 330PF 10% 50V	
C1708	1-124-903-11	ELECT 1uF 20% 50V	
C1709	1-124-903-11	ELECT 1uF 20% 50V	
C1710	1-130-471-00	MYLAR 0.001uF 5% 50V	
C1710	1-137-364-11	FILM 0.001uF 5% 50V	
C1711	1-130-471-00	MYLAR 0.001uF 5% 50V	
C1711	1-137-364-11	FILM 0.001uF 5% 50V	
C1712	1-130-736-11	FILM 0.01uF 5% 50V	
C1713	1-130-736-11	FILM 0.01uF 5% 50V	
C1714	1-124-903-11	ELECT 1uF 20% 50V	
C1715	1-124-903-11	ELECT 1uF 20% 50V	
C1716	1-124-903-11	ELECT 1uF 20% 50V	
C1717	1-162-291-31	CERAMIC 560PF 10% 50V	
C1718	1-162-291-31	CERAMIC 560PF 10% 50V	
C1719	1-124-477-11	ELECT 47uF 20% 25V	
C1720	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1721	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1722	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1723	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1724	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1725	1-124-477-11	ELECT 47uF 20% 25V	
C1726	1-124-903-11	ELECT 1uF 20% 50V	
C1727	1-124-903-11	ELECT 1uF 20% 50V	
C1728	1-104-792-51	ELECT 33uF 20% 16V	
C1729	1-124-907-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
*CN1701	1-568-832-11	SOCKET, CONNECTOR 13P	
		< TRIMMER >	
CT1701	1-141-260-00	CAP, TRIMMER 50PF	
		< DIODE >	
D1701	8-719-987-63	DIODE 1N4148M	
D1702	8-719-987-63	DIODE 1N4148M	
D1703	8-719-987-63	DIODE 1N4148M	
D1704	8-719-987-63	DIODE 1N4148M	
D1705	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC1701	8-759-063-04	IC IR3R42	
IC1702	8-759-634-51	IC M5218AP	
IC1703	8-759-140-53	IC uPD4053BC	
		< COIL >	
L1701	1-409-497-11	COIL (FILTER)	
		< TRANSISTOR >	
Q1701	8-729-900-61	TRANSISTOR DTA114ES	
Q1702	8-729-900-80	TRANSISTOR DTC114ES	
Q1703	8-729-900-80	TRANSISTOR DTC114ES	
Q1704	8-729-900-80	TRANSISTOR DTC114ES	
Q1705	8-729-900-61	TRANSISTOR DTA114ES	
		< RESISTOR >	
R1701	1-249-433-11	CARBON 22K 5% 1/4W	
R1702	1-249-435-11	CARBON 33K 5% 1/4W	
R1703	1-249-427-11	CARBON 6.8K 5% 1/4W	
R1704	1-247-858-11	CARBON 13K 5% 1/4W	
R1705	1-249-417-11	CARBON 1K 5% 1/4W	

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Replace only with part number specified.

Ref.No.	Part No.	Description			Remark
R1706	1-249-417-11	CARBON	1K	5%	1/4W
R1707	1-249-441-11	CARBON	100K	5%	1/4W
R1708	1-249-440-11	CARBON	82K	5%	1/4W
R1709	1-249-439-11	CARBON	68K	5%	1/4W
R1710	1-249-439-11	CARBON	68K	5%	1/4W
R1711	1-249-439-11	CARBON	68K	5%	1/4W
R1712	1-247-878-00	CARBON	91K	5%	1/4W
R1713	1-247-878-00	CARBON	91K	5%	1/4W
R1714	1-249-441-11	CARBON	100K	5%	1/4W
R1715	1-249-441-11	CARBON	100K	5%	1/4W
R1716	1-249-441-11	CARBON	100K	5%	1/4W
R1717	1-249-441-11	CARBON	100K	5%	1/4W
R1718	1-249-429-11	CARBON	10K	5%	1/4W
R1719	1-249-429-11	CARBON	10K	5%	1/4W
R1720	1-249-429-11	CARBON	10K	5%	1/4W
R1721	1-249-434-11	CARBON	27K	5%	1/4W
R1722	1-249-441-11	CARBON	100K	5%	1/4W

< VARIABLE RESISTOR >

RV1701	1-238-600-11	RES, ADJ, CARBON 10K
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K

< TEST PIN >

*TP1701	1-560-061-00	PIN, CONNECTOR 3P
*TP1702	1-560-061-00	PIN, CONNECTOR 3P

****

MISCELLANEOUS
****

8	1-575-848-11	WIRE, FLAT TYPE (5 CORE) (AEP, G, IT, EE, UK)
9	1-696-887-11	WIRE (FLAT TYPE) (32 CORE)
62	1-575-784-11	WIRE, FLAT TYPE (13 CORE) (CIS)
M801	1-698-403-11	MOTOR, FAN (H3900/H2900:E, EA, SP, MY, MX, AUS, JE)

****

ACCESSORIES & PACKING MATERIALS
****

	1-467-696-11	REMOTE COMMANDER (RM-S39) (H3900/H2900:IT)
	1-467-698-11	REMOTE COMMANDER (RM-S29) (H2900:AEP, G)
	1-501-369-11	ANTENNA (AEP, G, IT)
	1-501-374-11	ANTENNA, LOOP (AEP, G, IT)
⚠	1-575-131-11	CORD, POWER (AEP, G, IT)
	1-765-226-11	CORD (WITH CONNECTOR) (AEP, G, IT)
	3-758-775-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (H3900:AEP)
	3-758-775-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (H3900)
	3-758-776-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (H2900:AEP, G, IT)
	3-758-776-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (H2900:AEP, G, IT)
*	4-966-008-01	INDIVIDAL CARTON (H3900)
*	4-966-010-01	CUSION (FRONT) (H3900:AEP/H2900:AEP, EE, UK, E, CIS, EA, SP, MY, MX, AUS, JE)
*	4-966-011-01	CUSION (REAR) (H3900:AEP/H2900:AEP, EE, UK, E, CIS, EA, SP, MY, MX, AUS, JE)
*	4-966-021-01	INDIVIDIAL CARTON (H2900:AEP, G, IT)
	3-707-584-21	COVER, BATTERY (for RM-S29/S39)

****

****
HARDWARE LIST
****

#1	7-682-547-09	SCREW +BVTT 3X6 (S)
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2
#4	7-682-548-04	SCREW +BVTT 3X8 (S)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

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Published by Home A&V Products Div. Quality Engineering Dept.

9-959-558-11

HTC-H2900/H3900

SERVICE MANUAL

- HTC-H2900 is the deck and CD section in MHC-2900/E60X.
- HTC-H3900 is the deck and CD section in MHC-3900.

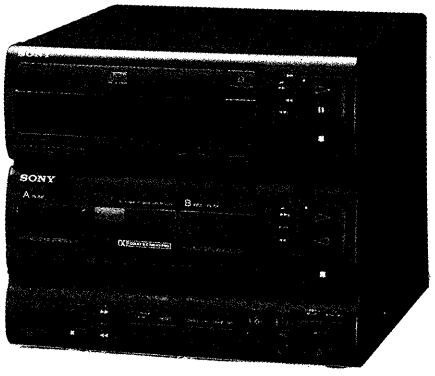


Photo: HTC-H3900

AEP Model
UK Model
E Model
Australian Model
Tourist Model
HTC-H2900

AEP Model
HTC-H3900

HTC-H2900
Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ▯▯ are trademarks of Dolby Laboratories Licensing Corporation.

HTC-H3900
Dolby noise reduction and HX Pro headroom extension manufacturedunder license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
"DOLBY", the double-D symbol ▯▯ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

CD Section	Model Name Using Similar Mechanism		HCD-H650/H650M
	CD Mechanism Type		CDM28-5BD16A
	Base Unit Name		BU-5BD16A
Tape deck Section	Model Name Using Similar Mechanism		HCD-H61/H61M
	Tape Transport Mechanism Type	DECK A	TCM-190RA12AL
		DECK B	TCM-190RB12AL (HTC-H2900)
			TCM-190RB42A (HTC-H3900)

SPECIFICATIONS

Tape player section

Recording system
4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
40 – 13,000 Hz (±3 dB),
using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB),
using Sony TYPE II cassette
40 – 15,000 Hz (±3dB),
using Sony TYPE IV casette
Wow and flutter
0.1% WRMS ±0.3%(DIN)

Dimensions
Approx. 225 x 195 x 225 mm (w/h/d)
(8 7/8 x 7 3/4 x 8 7/8 inches)
Mass
Approx. 3.5 kg
(7 lb 11 oz)

CD player section

System: Compact disc digital audio system
Laser: Semiconductor laser
Wavelength: 780 – 790 nm
Frequency response: 2 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB

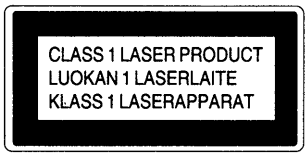
使用時は添付資料も参照のこと
Refer to the additional documents

MINI Hi-Fi COMPONENT SYSTEM

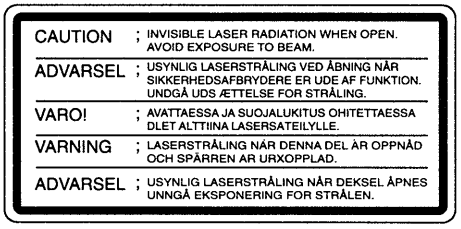
SONY®

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.


CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL ; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSATEILYLLE.
VARNING ; LASERSTRÅLING NÄR DENNA DEL ÄR OPPNÅD OCH SPÄRREN AR URXOPPLAD.
ADVARSEL ; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1
GENERAL

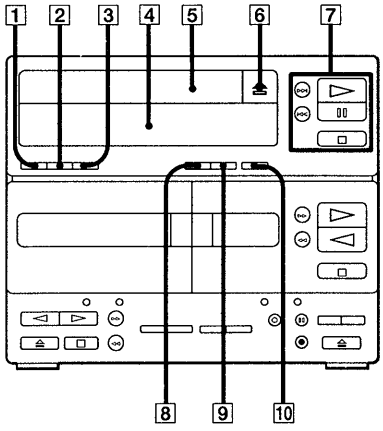
This section is extracted from instruction manual.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

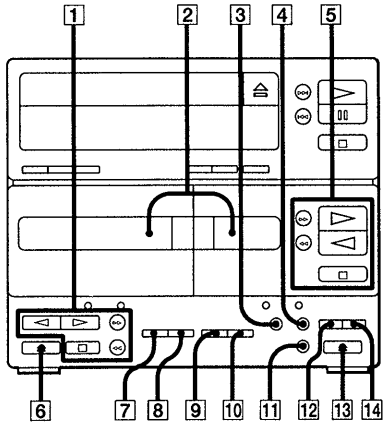
Front Panel

CD player section



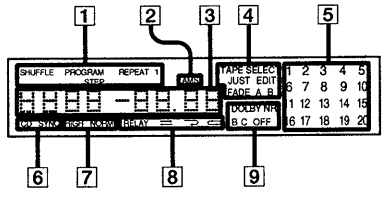
1 CONTINUE button (8)
2 SHUFFLE button (8)
3 PROGRAM button (9)
4 Display window (7, 15)
5 Disc tray (7)
6 ⏏ OPEN/CLOSE (open/close of the disc tray) (7)
7 CD player operating buttons
⏮⏪/⏩⏭ (manual search/AMS) (7)
▷ * (play) (7)
⏸ * (pause) (7)
■ * (stop) (7)
8 EDIT button (15)
9 CHECK button (9)
10 DISPLAY button (13)

Tape player section



1 Tape operating buttons (for deck A)
▷ * (front side play) (12)
◁ * (reverse side play) (12)
■ (stop) (12)
⏩ (fast rightward and AMS**) (12)
⏪ (fast leftward and AMS**) (12)
2 Cassette compartments (12)
3 ○ REC MUTE button (14)
4 ⏸ PAUSE button * (12)
5 Tape operating buttons (for deck B)
▷ * (front side play) (12)
◁ * (reverse side play) (12)
■ (stop) (12)
⏩ (fast rightward and AMS**) (12)
⏪ (fast leftward and AMS**) (12)
**AMS: Automatic Music Sensor (12)
6 ⏏ button (for deck A) (12)
7 COUNTER A/B button (13)
8 RESET button (13)
9 DIRECTION button (12)
10 DOLBY NR button (13)
11 ● REC button* (14)
12 DUBBING MODE button (18)
13 ⏏ button (for deck B) (12)
14 CD SYNCHRO button* (13, 15, 16)

Display Window

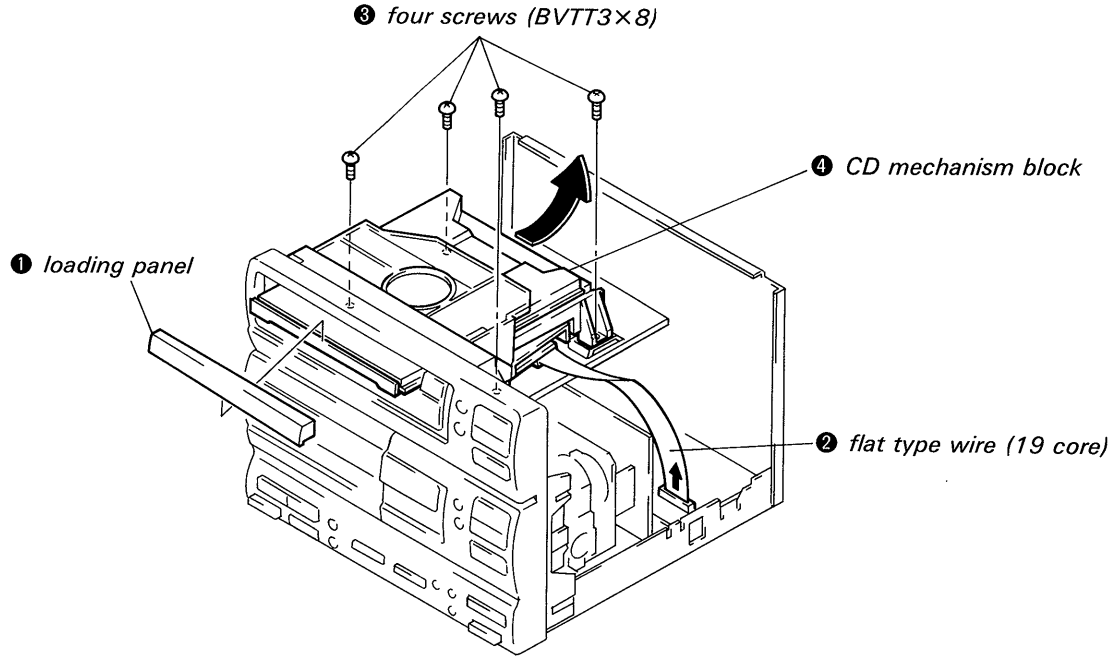


1 CD play mode indications (8)
2 AMS indication (7)
3 Counter indication (7, 15)
4 CD edit mode indications (15)
5 Music calendar (7, 15)
6 CD SYNC (synchro) indication (13)
7 Dubbing mode indications (18)
8 Direction mode indications (12)
9 DOLBY NR indications (13)

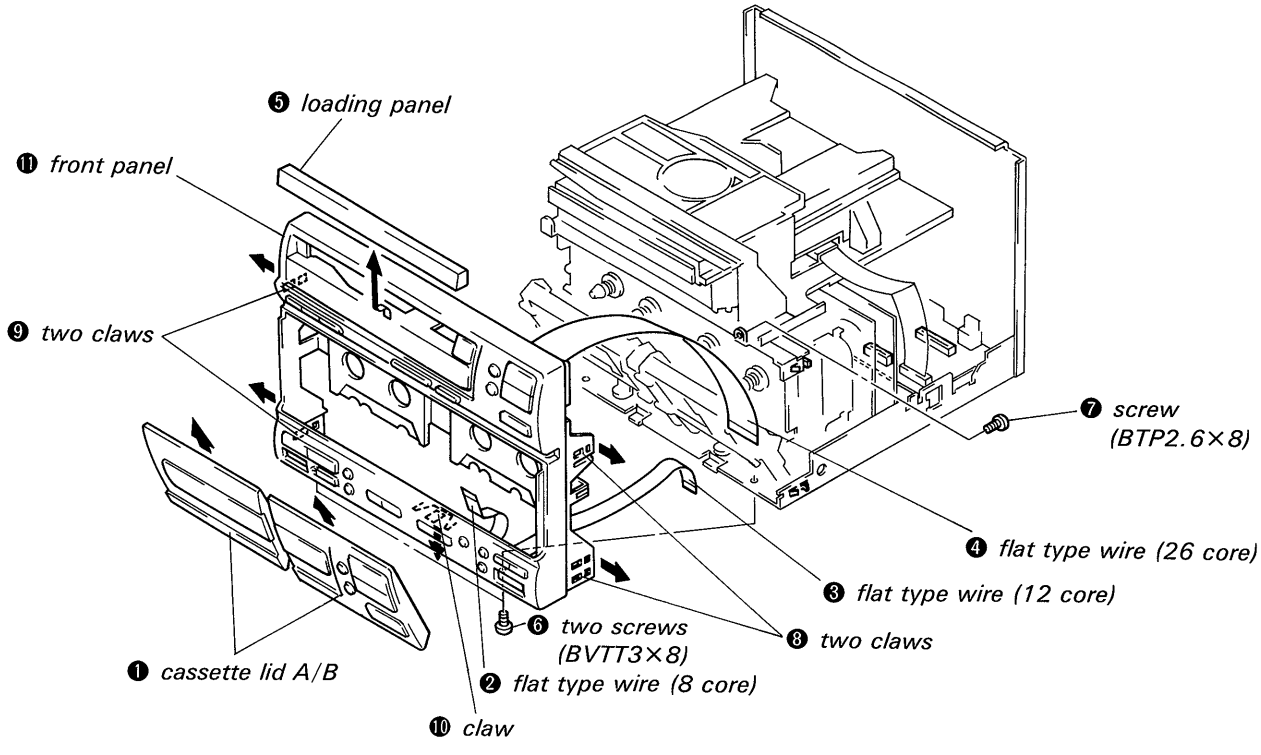
SECTION 2
DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

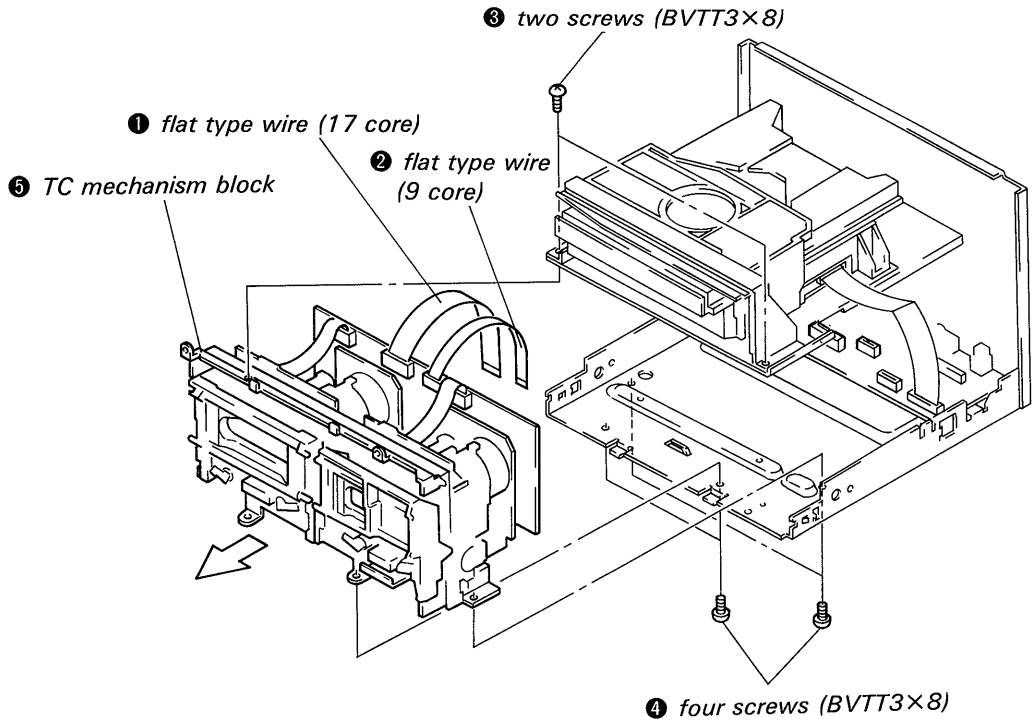
2-1. CD MECHANISM BLOCK



2-2. FRONT PANEL



2-3. TC MECHANISM BLOCK



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

DECK SECTION

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   record / playback head — pinch roller
   erase head — rubber belts
   capstan — idler
2. Demagnetize the record / playback head with a head demagnetizer
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torgue	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g•cm (0.49 to 0.83 oz•inch)
FWD Back tension	CQ-102C	2 to 6g•cm (0.028 to 0.08 oz•inch)
REV	CQ-102RC	35 to 60g•cm (0.49 to 0.83 oz•inch)
REV Back tension	CQ-102RC	2 to 6g•cm (0.028 to 0.08 oz•inch)
FF, REW	CQ-201B	70 to 110g•cm (0.98 to 1.52 oz•inch)

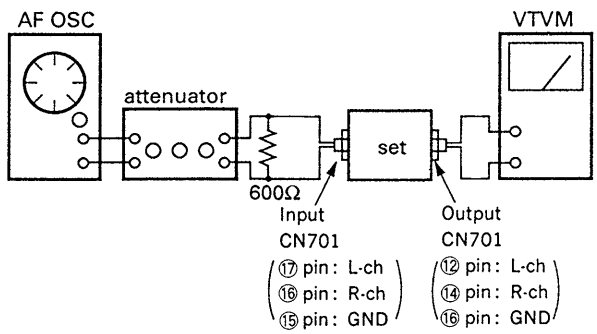
3-2. ELECTRICAL ADJUSTMENTS

DECK SECTION

Note : The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording. The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
  DOLBY NR switch : OFF
  DIRECTION MODE switch : ⇄
- Standard Record :
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

– Record Mode –



Standard Input Level

input terminal	Input (CN701)
input level	0.31V (– 8dB)

Standard Output Level

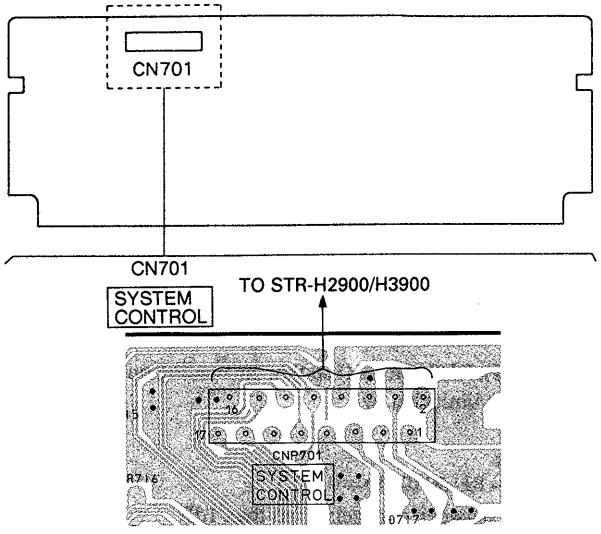
output terminal	Output (CN701)
output level	0.31V (– 8dB)

Test tape

Type	Signal	Used for
P-4-A100	10kHz, –10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB = 0.775V

TC POWER BOARD (CONDUCTOR SIDE)

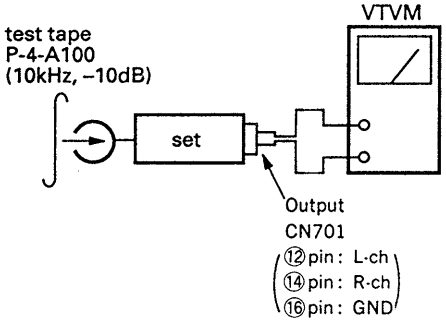


Record / Playback Head Azimuth Adjustment

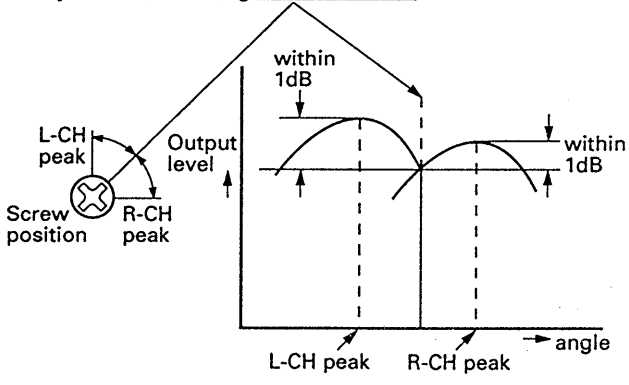
DECK A | DECK B

Procedure :

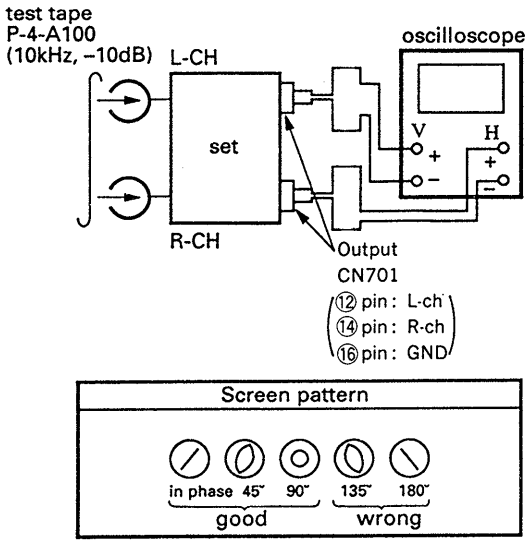
1. Mode : FWD Playback



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



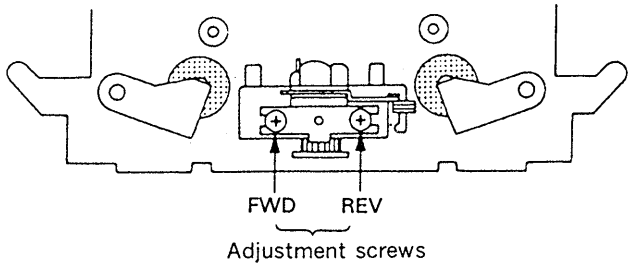
3. Phase Check
   Mode : FWD playback



4. Set in the REV mode and repeat the step 1-3.
5. After the adjustment, lock the screws with locking compound.

Adjustment Location :

• Azimuth adjustment screws

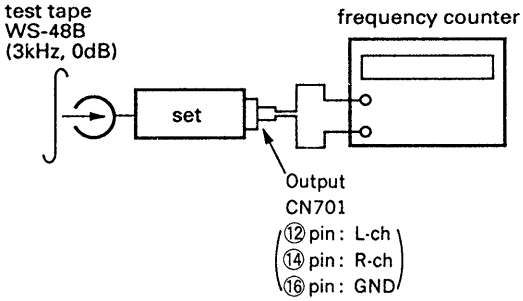


Tape Speed Adjustment DECK A DECK B

Perform high speed adjustment before normal speed adjustment

Procedure :

Mode : FWD playback



(High speed adjustment) DECK A

1. Turn ON the power switch with TP501 of the TC board shorted.
2. Set a WS-48B tape onto the deck A and press the ▷ switch to activate FWD.
3. Upon beginning FWD, press the S903 (DUBBING MODE)
4. Confirm that the reading of the frequency counter satisfies 6,000 ±60Hz.
5. Adjust the RV72 (DECK A) so that the frequency counter reading becomes 6,000±60Hz.
6. Set in the REV mode and repeat the Step 2-5.

(High speed adjustment) DECK B

1. Turn ON the power switch with TP501 of the TC board shorted.
2. Set a WS-48B tape onto the deck B and press the ▷ switch to activate FWD.
3. Upon beginning FWD, press the S903 (DUBBING MODE)
4. Confirm that the reading of the frequency counter satisfies 6,000 ±60Hz.
5. Adjust the RV72 (DECK B) so that the frequency counter reading becomes 6,000±60Hz.
6. Set in the REV mode and repeat the Step 2-5.
7. Disconnect the TP501.

(Normal speed adjustment) DECK A DECK B

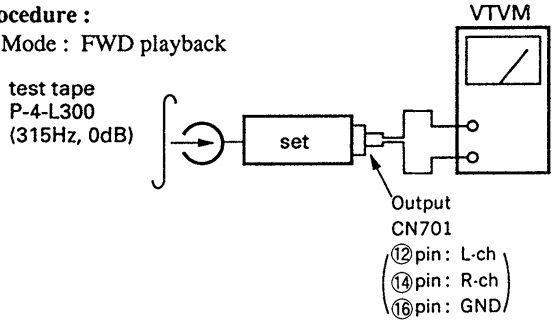
1. Set a WS-48B tape onto the deck A.
2. Press the ▷ switch to activate FWD.
3. Confirm that the reading of the frequency counter satisfies 3,000 ±30Hz.
4. If the above is not satisfied, adjust the RV71 so that the readings of the frequency counter for both decks A and B become 3,000± 30Hz.
5. Set in the REV mode and repeat the step 1-4.

Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1%.

Playback Level Adjustment DECK A DECK B

Procedure :

Mode : FWD playback



Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

Ajustment Limits :

Output level : −8±1dB (0.28 — 0.35V)

Level difference between channels : less than 1dB

Confirm that the OUTPUT level does not change in playback mode while changing the mode from playback to stop several times.

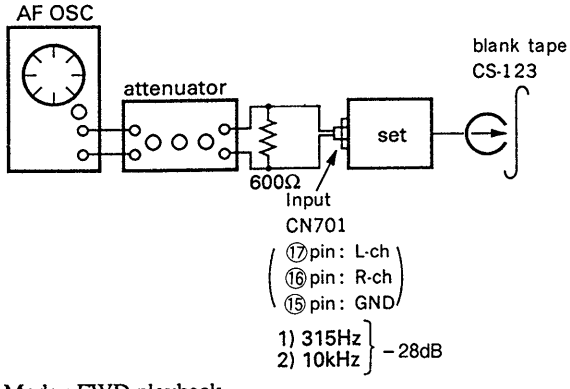
Record Bias Adjustment DECK B

Setting :

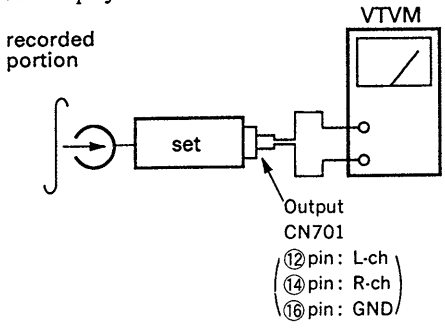
REC LEVEL control : Standard Record (See page 4).

Procedure :

1. Mode : record



2. Mode : FWD playback



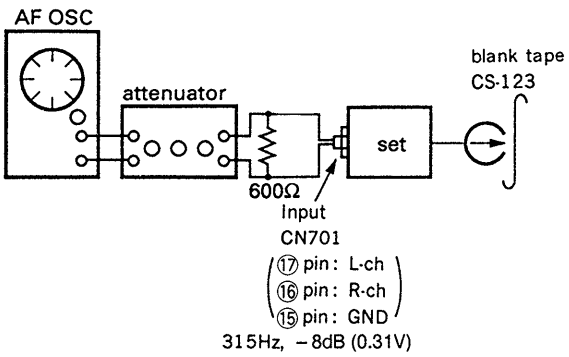
3. Playback the signal recorded in step 1.
   Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust semi-fixed resistor as shown below and repeat the steps given above.
   H2900 : RV12 (L-CH), RV22 (R-CH)
   H3900 : RV81 (L-CH), RV91 (R-CH)

Record Level Adjustment

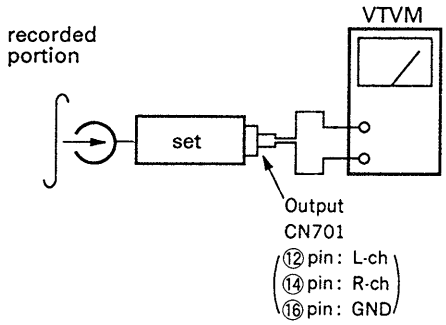
DECK B

Procedure :

1. Mode : record



2. Mode : FWD playback

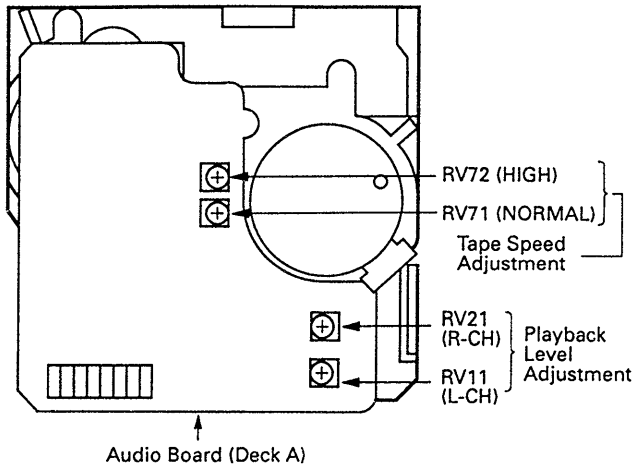


3. Playback the signal recorded in step 1.
   Confirm that the signal leve is within the adjustment limits below.
   If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the steps given above.

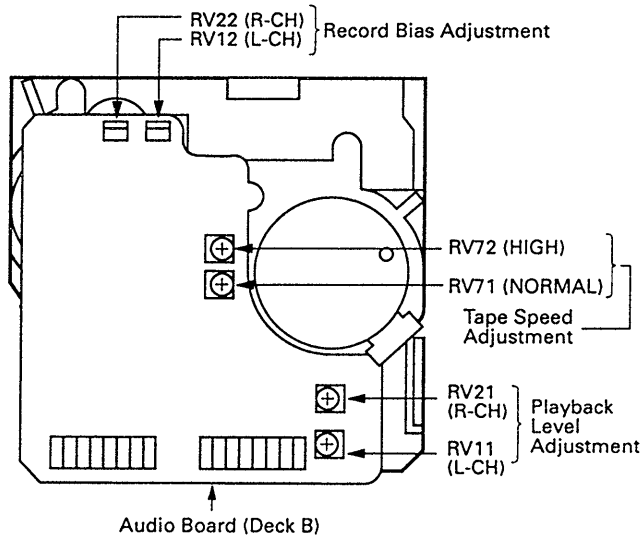
Adjustment Limits : −8±1dB (0.29 — 0.33V)

Adjustment Location :

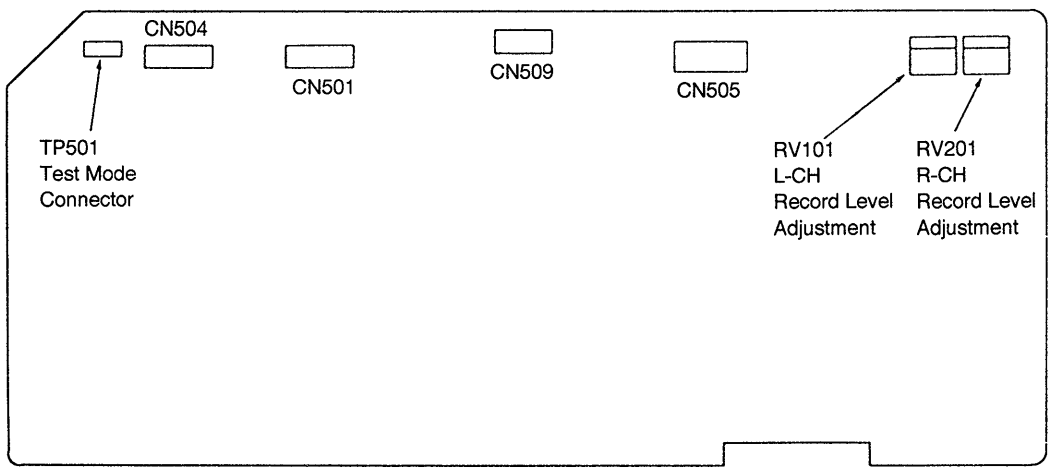
AUDIO board (DECK A)



AUDIO board (DECK B)



TC board (Component Side)

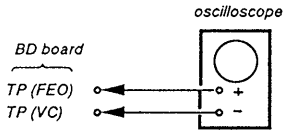


CD SECTION

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10M Ω impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

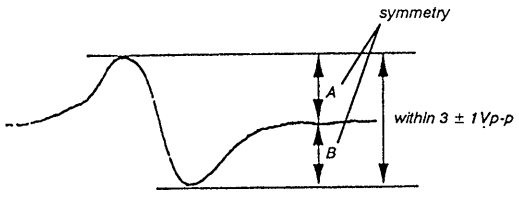
S-Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) and BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18)in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1Vp-p.

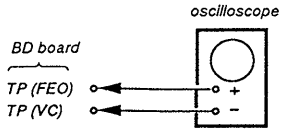
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note : ● Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
● Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



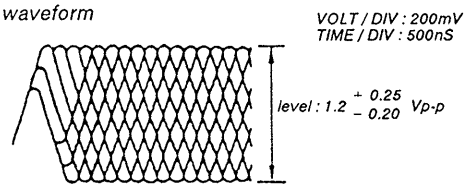
Procedure :

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

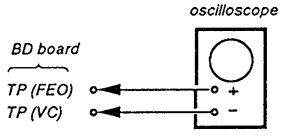
Note :

Clear RF signal waveform means that the shape " ◇ " can be clearly distinguished at the center of the waveform.

RF signal waveform



E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

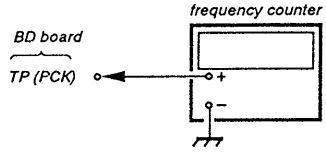
Traverse waveform

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire



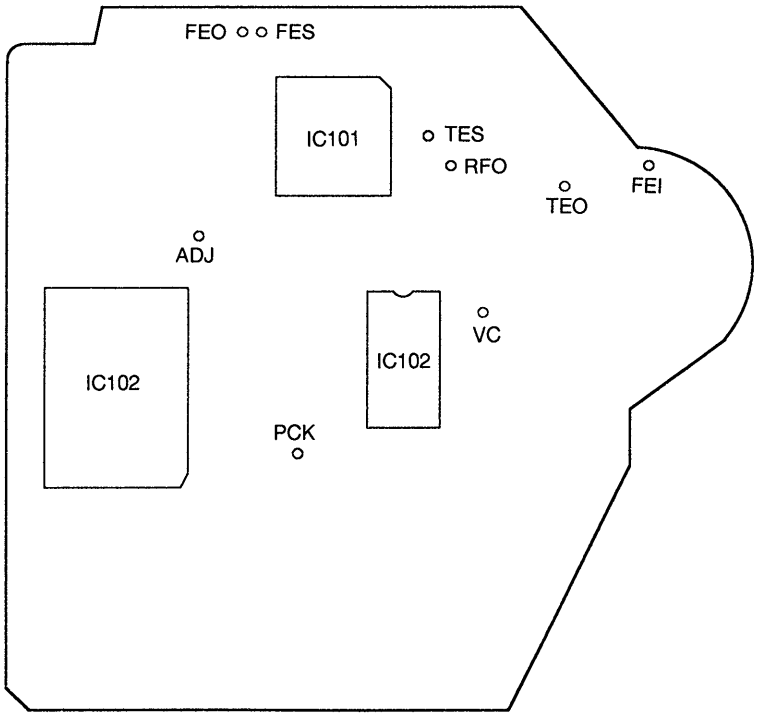
2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location :

【BD BOARD】 (SIDE B)



SECTION 4
DIAGRAMS

4-1. IC PIN FUNCTION

• IC501 Fluorescent Tube Driver μPD75212AGF-578-3BE

Pin No.	Pin Name	I/O	Description
1	RESET	I	System reset input terminal (LOW ACTIVE)
2	T0	O	FL Digit output terminal
3	T1	O	FL Digit output terminal
4	T2	O	FL Digit output terminal
5	T3	O	FL Digit output terminal
6	T4	O	FL Digit output terminal
7	T5	O	FL Digit output terminal
8	T6	O	FL Digit output terminal
9	T7	O	FL Digit output terminal
10	T8	O	FL Digit output terminal
11	T9	O	FL Digit output terminal
12	T10/S15/PH3	O	FL Segment output terminal
13	T11/S14/PH2	O	FL Segment output terminal
14	T12/S13/PH1	O	FL Segment output terminal
15	T13/S12/PH0	O	FL Segment output terminal
16	T14/S11	O	FL Segment output terminal
17	T15/S10	O	FL Segment/KEY SCAN OUTPUT terminal
18	V LOAD	—	FIP controller/driver pull-down resistor connect terminal
19	V PRE	—	FIP controller/driver output buffer power supply terminal
20	S9	O	FL Segment/KEY SCAN OUTPUT terminal
21	S8	O	FL Segment/KEY SCAN OUTPUT terminal
22	S7	O	FL Segment/KEY SCAN OUTPUT terminal
23	S6	O	FL Segment/KEY SCAN OUTPUT terminal
24	S5	O	FL Segment/KEY SCAN OUTPUT terminal
25	S4	O	FL Segment/KEY SCAN OUTPUT terminal
26	VDD	—	+5V
27	S3	O	FL Segment/KEY SCAN OUTPUT terminal
28	S2	O	FL Segment/KEY SCAN OUTPUT terminal
29	S1	O	FL Segment/KEY SCAN OUTPUT terminal
30	S0	O	FL Segment/KEY SCAN OUTPUT terminal
31	TC SYNC	I	SYNC input for indicating first data of deck/display data
32	TC CLK	I	Clock for receiving deck/display data
33	NC	—	Not used
34	TC DAT	I	DECK/DISPLAY data input
35	BUS IN	I	Audio Bus
36	DP CLK	I	Clock for receiving CD display data
37	TC RST	I	DECK/DISPLAY reset input
38	MODE	I	Mode
39	EZ LED	O	At EZ ON, blinking LED ON/OFF output
40	CD OFF	O	CD microcomputer and LSI power supply ON/OFF output
41	BUS OUT	O	Audio Bus output
42	KEY REQ	O	Key data request output to CD microcomputer
43	DPDAT 0	I/O	CD key data output and CD display data input
44	DPDAT 1	I/O	CD key data output and CD display data input
45	DPDAT 2	I/O	CD key data output and CD display data input

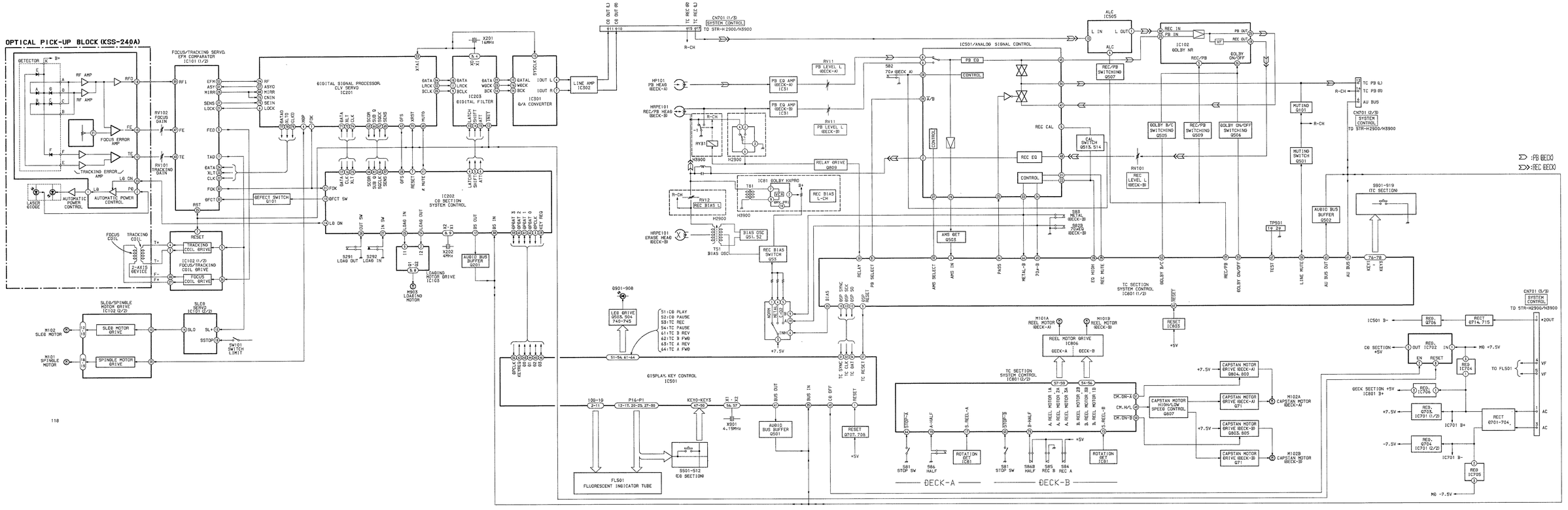
Pin No.	Pin Name	I/O	Description
46	DPDAT 3	I/O	CD key data output and CD display data input
47	KEY 0	I	CD key scan data input
48	KEY 1	I	CD key scan data input
49	KEY 2	I	CD key scan data input
50	KEY 3	I	CD key scan data input
51	CD PLYL	O	CD PLAY-LED ON/OFF output
52	CD PASL	O	CD PAUSE-LED ON/OFF output
53	TCBRCL	O	DECK-B REC-LED ON/OFF output
54	TCBPSL	O	DECK-B PAUSE-LED ON/OFF output
55	PPO	—	Not used
56	X 1	I	System clock 4.19MHz
57	X 2	I	System clock 4.19MHz
58	VSS	—	GND
59	VSS	—	GND
60	XT 2	—	Not used
61	TCBRVL	O	DECK-B REV-LED ON/OFF output
62	TCBFWL	O	DECK-B FWD-LED ON/OFF output
63	TCARVL	O	DECK-A REV-LED ON/OFF output
64	TCAFWL	O	DECK-A FWD-LED ON/OFF output

• **IC801 TC Section System Controller μPD78052-020**

Pin No.	Pin Name	I/O	Description
1	METER R	I	Not used (GND)
2	VOLUME	I	Not used (+2.5V)
3	AMS IN	I	Signal input from the AMS amplifier "H": Detected "L": Not detected
4	AVSS	—	GND
5			Not used (open)
6			Not used (open)
7	AVREF 1		A/D reference voltage +5V
8			Not used (open)
9	DISP RESET	O	Display RESET signal output
10	DISP SYNC	O	Display SYNC signal output
11	DISP DATA IN	I	Not used (+5V)
12	DISP DATA OUT	O	Display data output
13	DISP CLOCK	O	Clock output for data transmission
14	—		Not used (open)
15	B. REEL	I	Deck-B reel pulse input
16	B. REEL OUT	O	Not used (open)
17	A. REEL	I	Deck-A reel pulse input
18	A. REEL OUT	O	Not used (open)
19	A. HALF	I	Deck-A HALF detection "L": Detected "H": Not detected
20	—		Not used (open)
21	—		Not used (open)
22	—		Not used (open)
23	—		Not used (open)
24	—		Not used (open)
25	SAF VERSION	I	SAF switch "L": None "H": Provided
26	KEY VERSION	I	Key version switch "L": A/D "H": Serial
27	—		Not used (open)
28	EQ HIGH	O	REC equalizer performance SW "H": High speed "L": Normal speed
29	REC MUTE	O	REC mute control output "L": Mute ON "H": Mute OFF
30	RELAY	O	PB/REC selection switch output "L": REC
31	PB SELECT	O	Deck A/B switch output in the playback mode "L": Deck A "H": Deck B
32	AMS GAIN SELECT	I	AMS level output
33	VSS	—	GND
34	PASS	O	NR PASS switch output "H": PASS NR "L": Through
35	LINE MUTE	O	Line mute control output "H": Mute off
36	ANALOG BUS	O	Not used (open)
37	REC/PB	O	Dolby amplifier REC/PB switch output "L": REC "H": PB
38	BIAS	O	Bias ON/OFF switch output "H": OFF "L": ON
39	POWER OUT	O	Not used
40	POWER IN	I	Not used
41	+7.5V DETECT	I	7.5V power supply detection
42	LINE MUTE	O	Line mute control output "L": Mute ON
43	—		Not used (open)
44	—		Not used (open)
45	—		Not used (open)

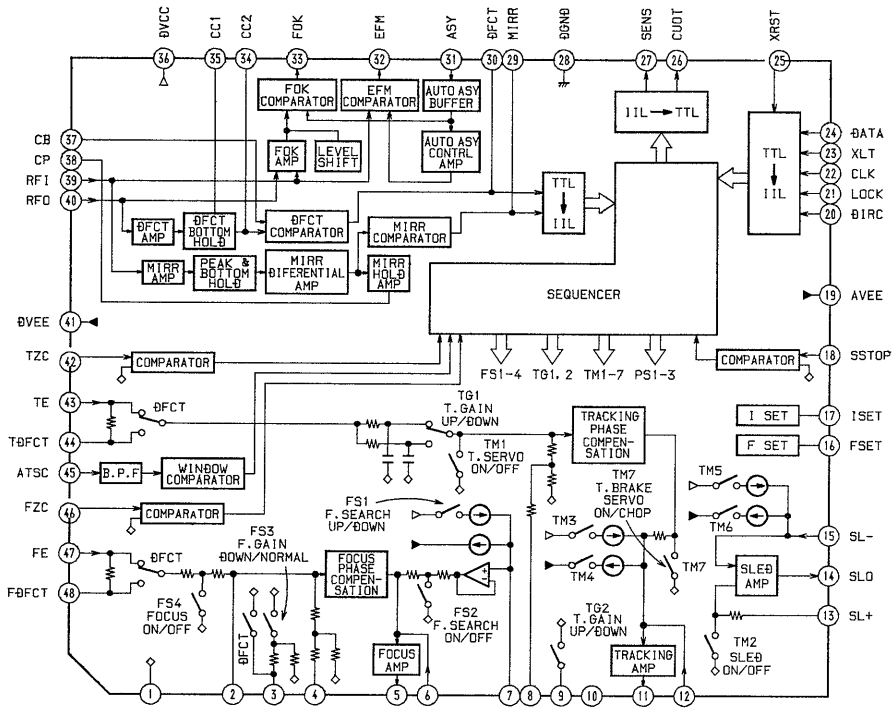
Pin No.	Pin Name	I/O	Description
46	—		Not used (open)
47	—		Not used (open)
48	—		Not used (open)
49	C. MOTOR HIGH	O	Capstan motor high speed SW output "H": High "L": Ncrmal
50	B C. MOTOR	O	Deck-B capstan motor SW output "L": ON "H": OFF
51	A C. MOTOR	O	Deck-A capstan motor SW output "L": ON "H": OFF
52	DOLBY B/C	O	Dolby B/C switch control output "L": Dolby C "H": Dolby B Not used (open)
53	DOLBY ON/OFF	O	Dolby ON/OFF switch control output "L": ON "H": OFF
54	B REEL MOTOR 2	O	Reel motor control output
55	B REEL MOTOR 3	O	Reel motor control output
56	B REEL MOTOR 1	O	Reel motor control output
57	A REEL MOTOR 1	O	Reel motor control output
58	A REEL MOTOR 3	O	Reel motor control output
59	A REEL MOTOR 2	O	Reel motor control output
60	RESET	I	System reset input "L": Reset
61	AU BUS IN	I	Audio bus input
62	AU BUS OUT	O	Audio bus output
63	B STOP SW	I	Deck-B STOP detection "H": STOP
64	A STOP SW	I	Deck-A STOP detection "H": STOP
65	70μ	I	Chrome switch input for deck B "L": Normal
66	METAL	I	Metal switch input for deck B "H": Metal
67	TEST	I	Mode selection for electrical adjustment "L": TEST mode activated by POWER ON
68	VDD		Power supply terminal +5V
69	X2	O	Clock output (4MHz)
70	X1	I	Clock input
71	GND		GND
72			Not used (open)
73			Not used (GND)
74	AVDD		Power supply 5V
75	AVREF		A/D reference voltage +5V
76	KEY1	I	Key input (analog)
77	KEY2	I	Key input (analog)
78	KEY3	I	Key input (analog)
79	B HALF	I	Deck-B HALF detection "L": Detected "H": Not detected
80	METER L	I	Not used (GND)

4-2. BLOCK DIAGRAM

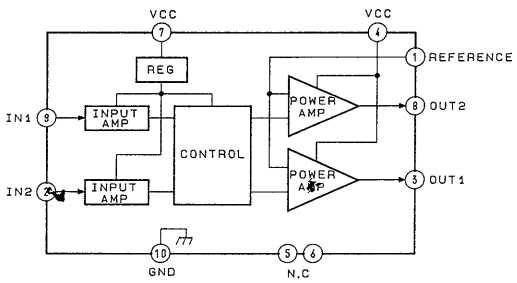


● IC Block Diagrams

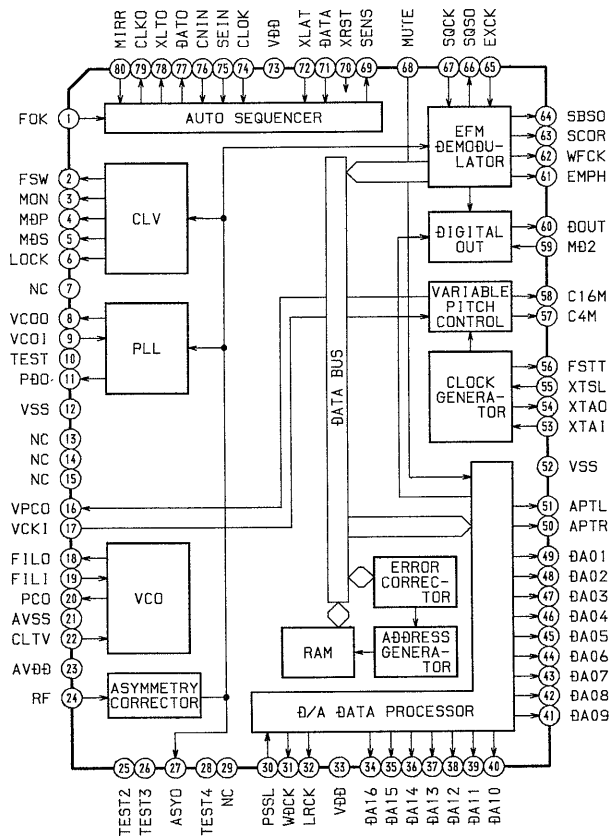
IC101 CXA1372AQ



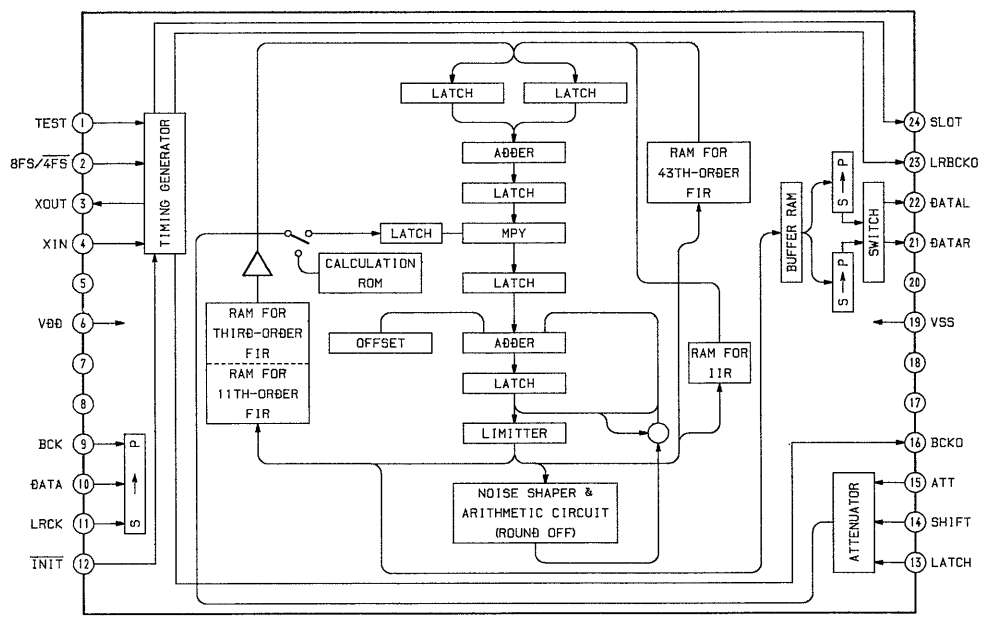
IC103 M54641FP



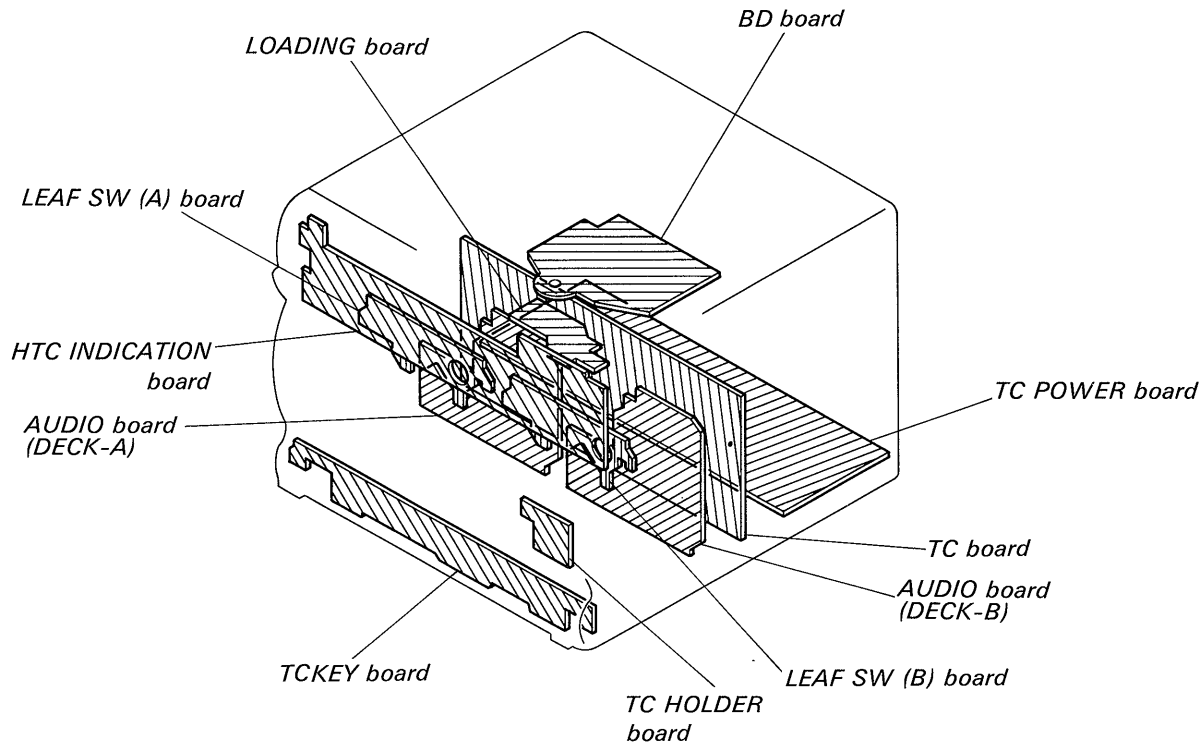
IC201 CXD2500BQ



IC203 MSM6538-01GS-VKR1

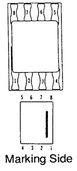


4-3. CIRCUIT BOARDS LOCATION



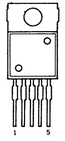
4-4. SEMICONDUCTOR LEAD LAYOUTS

CXA1372AQ

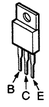


Marking Side

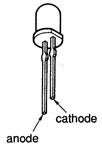
MC14052BF



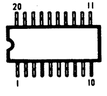
2SB1094-LK
2SD2012



SEL1450GM-YG
SEL1950KM



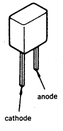
NJL5165K-B (H1)



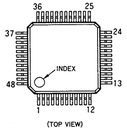
(TOP VIEW)

2SB1116-L

SEL5220
SEL5920

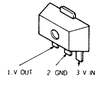


CXA1599Q



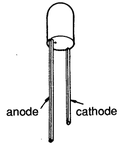
(TOP VIEW)

TA8242AK



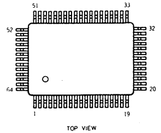
2SD999-CLCK
2SD1622-S

SEL5420S



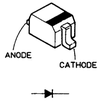
M5230L-A

μPD75212AGF-578-3BE

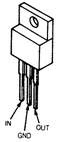


TOP VIEW

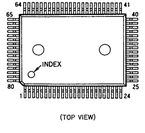
1SS352
μA110



M5F78M07L
M5F79M07L
TA7805S

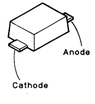


μPD78052-020



(TOP VIEW)

MA8039
MA8082-M



4-5. PRINTED WIRING BOARDS
—CD Section—

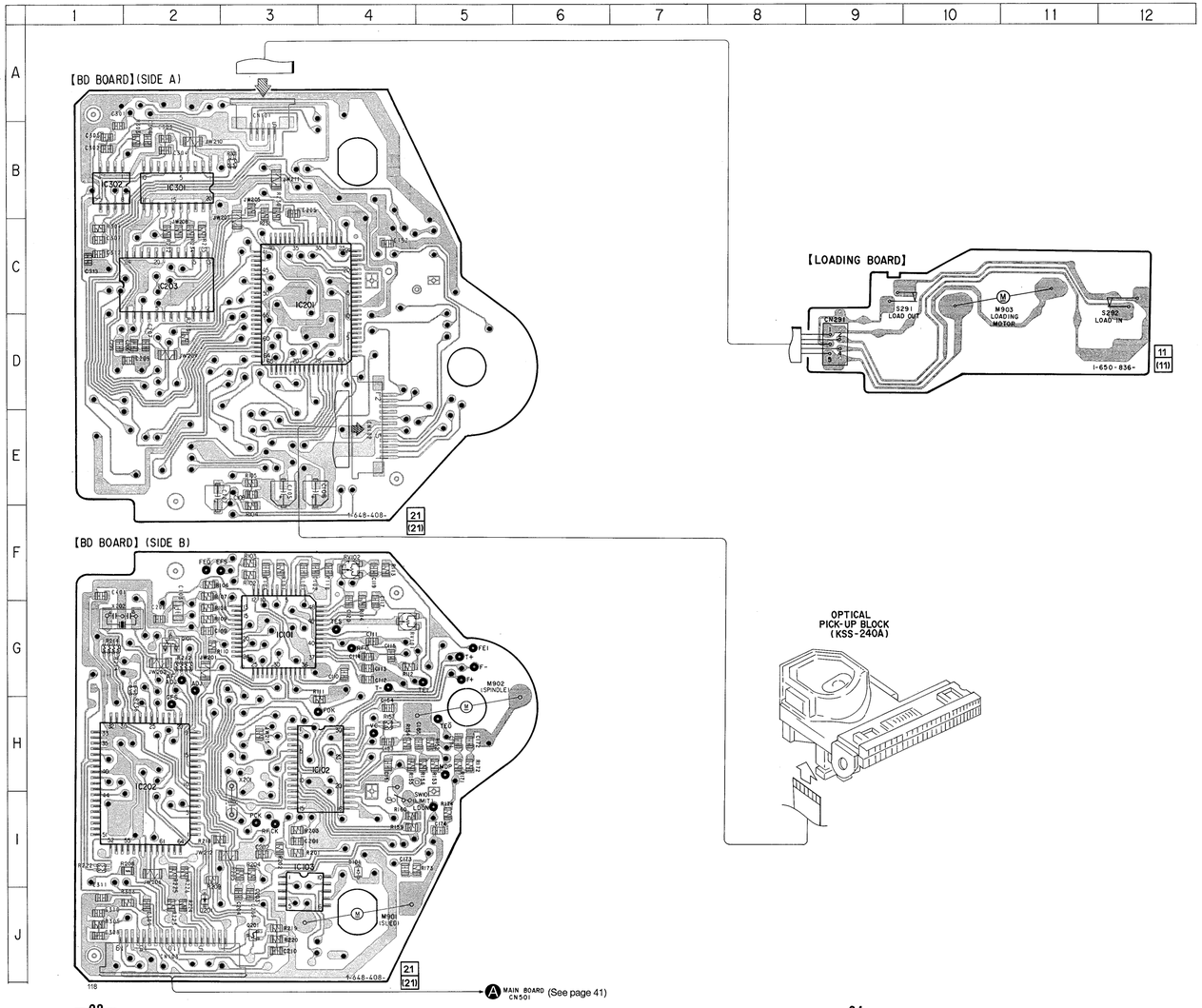
• Semiconductor Location

Ref. No.	Location
D101	I - 4
D201	J - 2
IC101	G - 3
IC102	H - 3
IC103	J - 3
IC201	C - 3
IC202	H - 2
IC203	C - 2
IC301	B - 2
IC302	B - 1
Q101	I - 4
Q201	J - 3

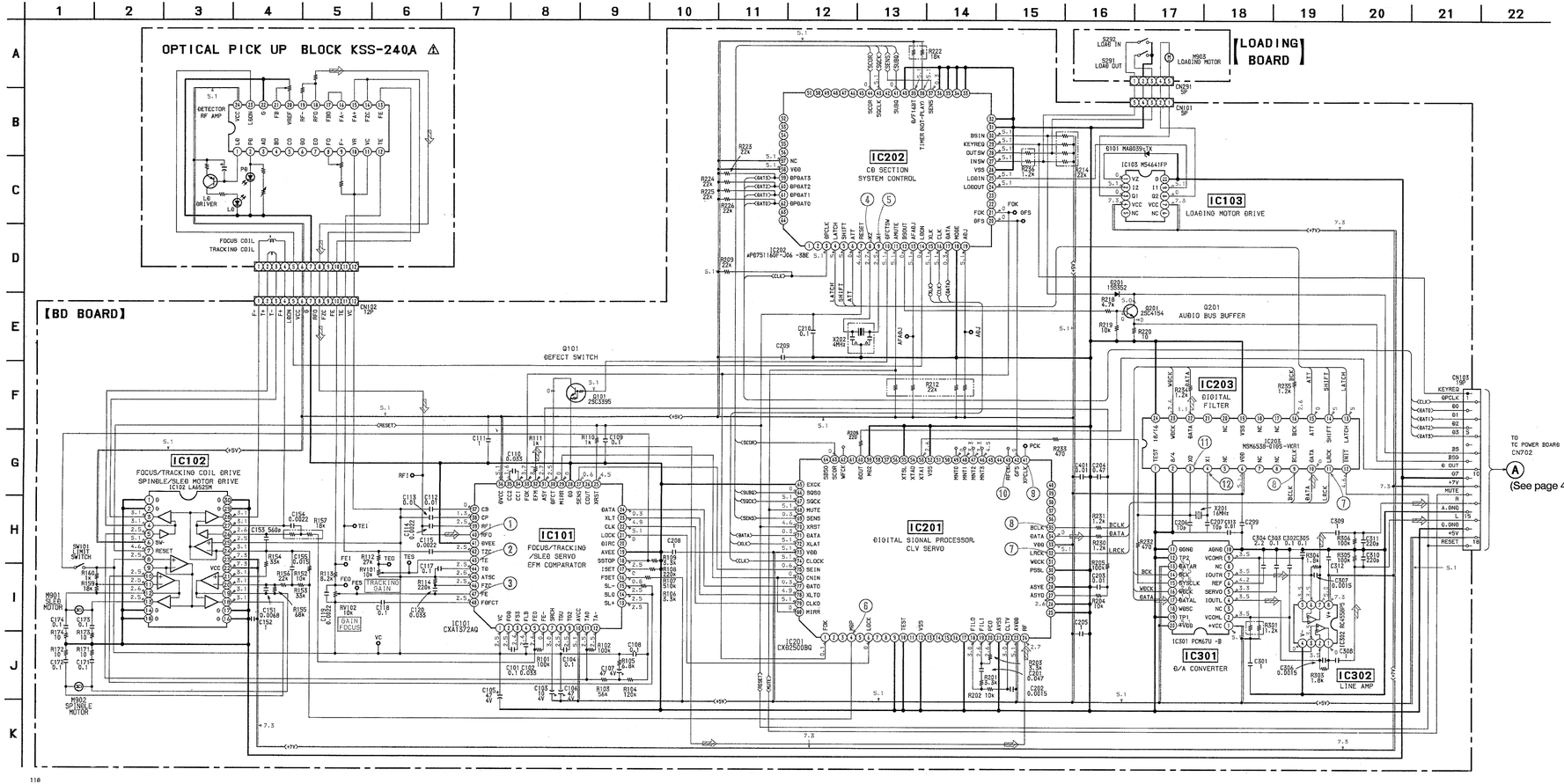
Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (B Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (A Side)	Parts on the parts face side seen from the parts face are indicated.



4-6. SCHEMATIC DIAGRAM —CD Section—



• WAVEFORMS

①	1.2Vp-p IC101 ㊵ PLAY	⑦	5.0Vp-p 23 μsec IC203 ⑪
②	2.5V APPROX 500mVp-p IC101 ㊸ PLAY	⑧	5.5Vp-p 480nsec IC203 ⑩
③	2.5V APPROX 100mVp-p IC101 ㊼ PLAY	⑨	5.8Vp-p 240nsec IC201 ㊶ PLAY
④	5Vp-p 4MHz IC202 ⑧	⑩	5.2V 136 μsec IC201 ㊸
⑤	4.2Vp-p 4MHz IC202 ⑨	⑪	5Vp-p 16MHz IC203 ③
⑥	2.2Vp-p 7.5 μsec IC201 ④ PLAY	⑫	5Vp-p 16MHz IC203 ④

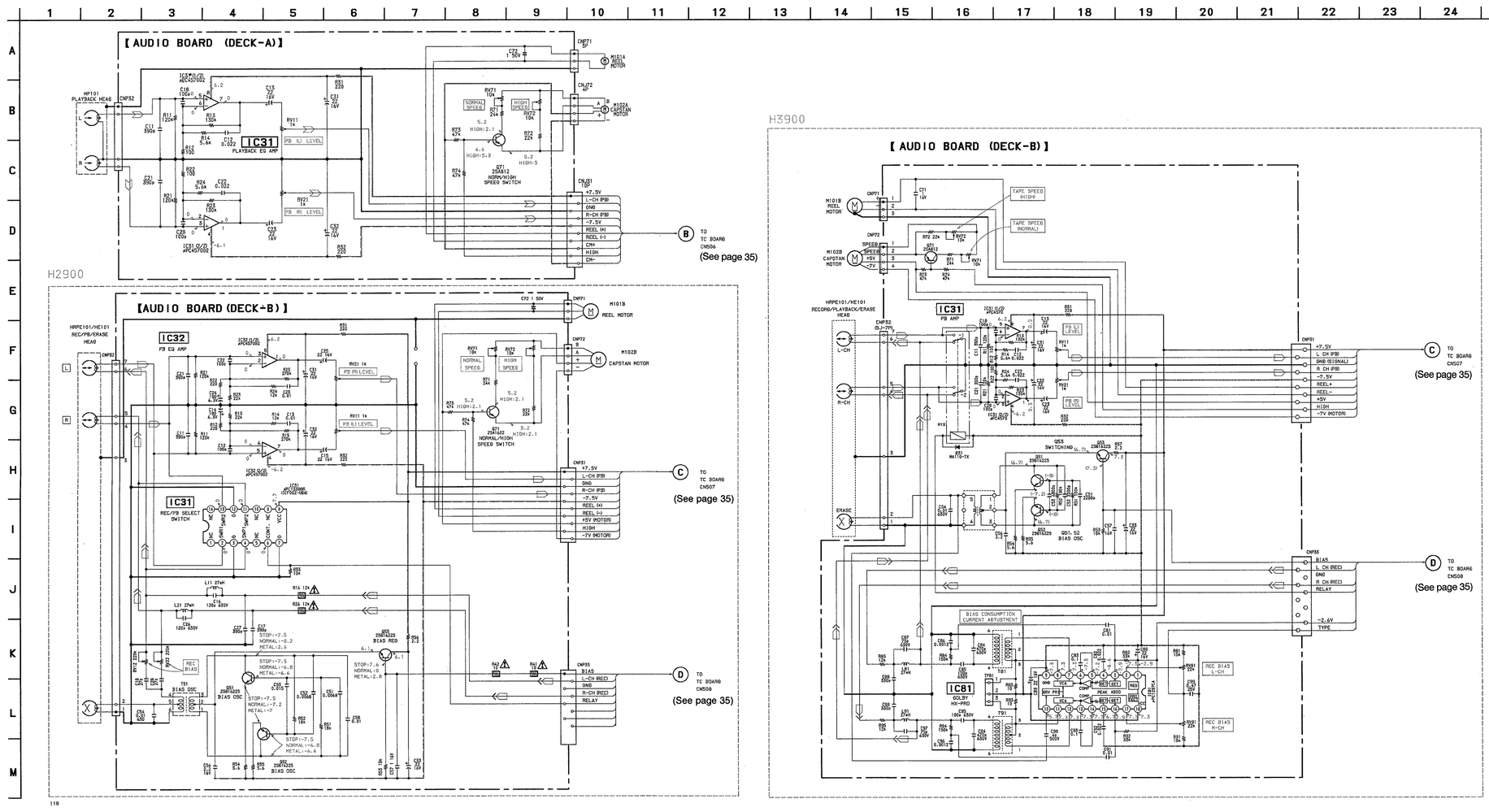
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ⊕ ═══ : B+ Line
- ⊖ ═══ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▨ : CD

4-7. SCHEMATIC DIAGRAM —AUDIO Section—



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

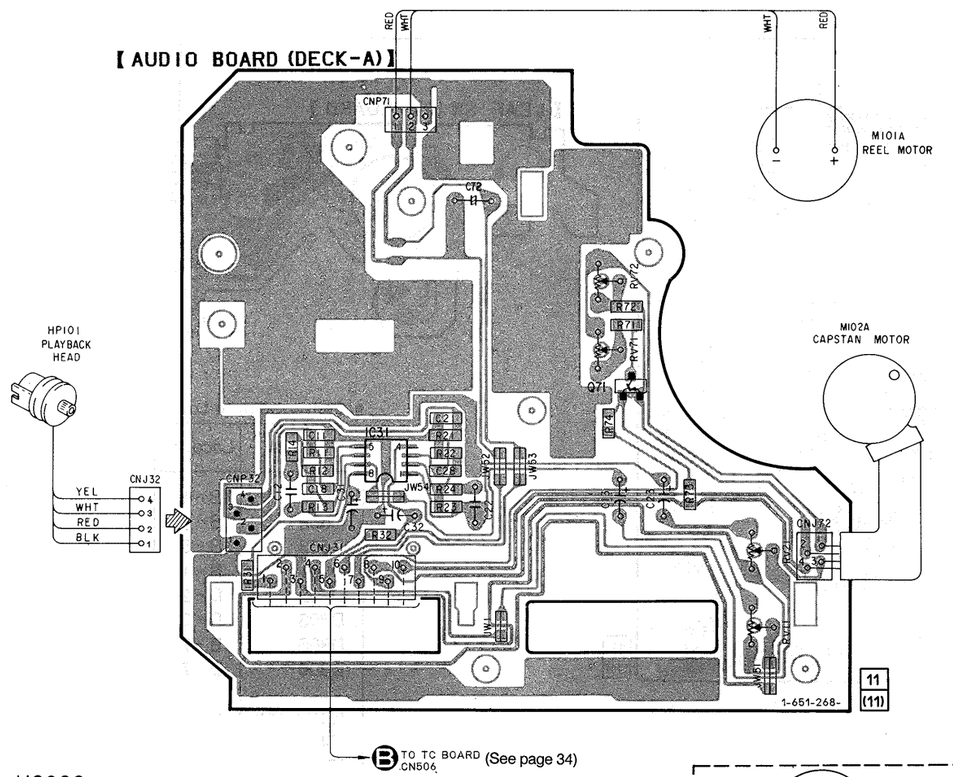
- : B+ Line
- : B− Line
- : adjustment for repair.
- Voltage are dc with respect to ground under no-signal (detuned) conditions.
  no mark : STOP
  ( ) : REC
- Signal path.
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK B)

4-8. PRINTED WIRING BOARDS —AUDIO Section—

● See page 21 for Circuit Boards Location.

● See page 22 for Semiconductor Lead Layouts.

【AUDIO BOARD (DECK-A)】



Ⓑ TO TC BOARD CN506 (See page 34)

● **Semiconductor Location**

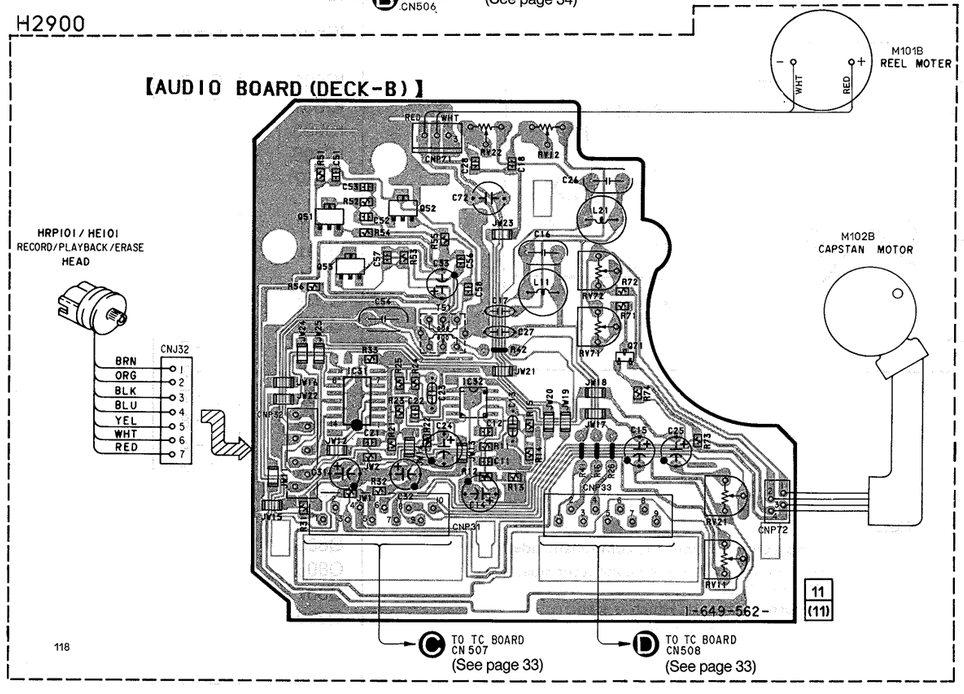
Ref. No.	Location
D31	H-9
IC31 (DECK-A)	D-3
IC31 (DECK-B) (H2900)	H-3
IC31 (DECK-B) (H3900)	H-10
IC32	H-4
IC81	G-10
Q51 (DECK-B) (H2900)	G-3
Q51 (DECK-B) (H3900)	G-9
Q52 (DECK-B) (H2900)	G-3
Q52 (DECK-B) (H3900)	G-10
Q53 (DECK-B) (H2900)	G-3
Q53 (DECK-B) (H3900)	G-9
Q71 (DECK-A)	C-5
Q71 (DECK-B) (H2900)	H-5
Q71 (DECK-B) (H3900)	H-11

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

H2900

【AUDIO BOARD (DECK-B)】

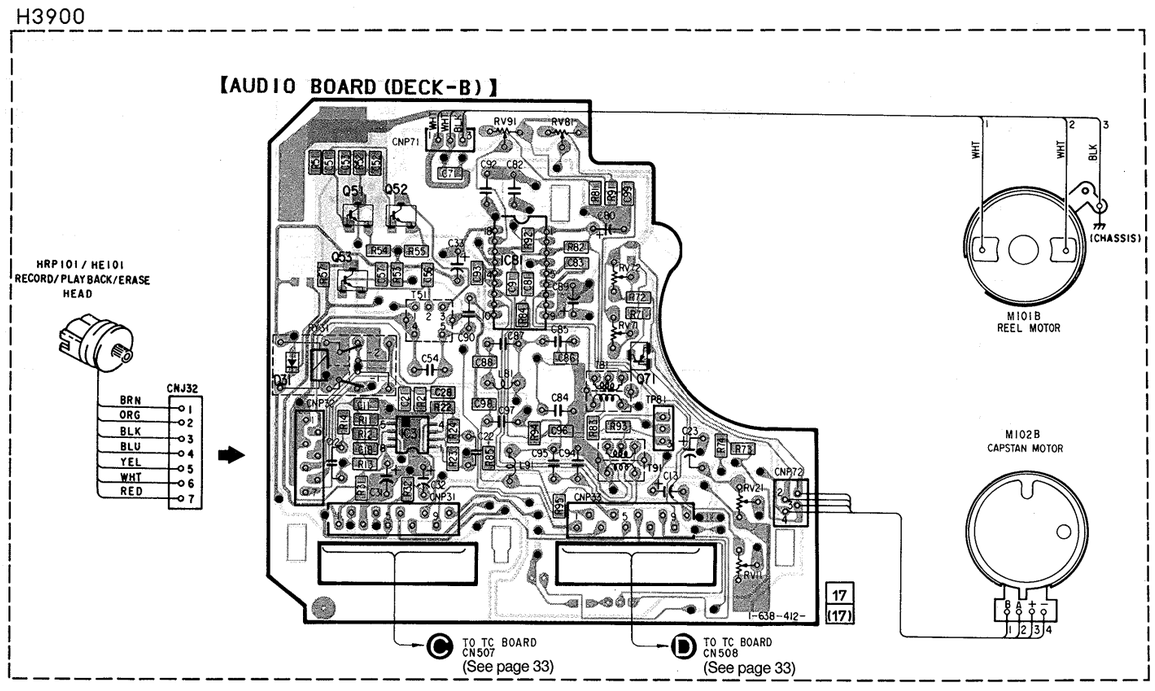


Ⓒ TO TC BOARD CN507 (See page 33)

Ⓓ TO TC BOARD CN508 (See page 33)

H3900

【AUDIO BOARD (DECK-B)】

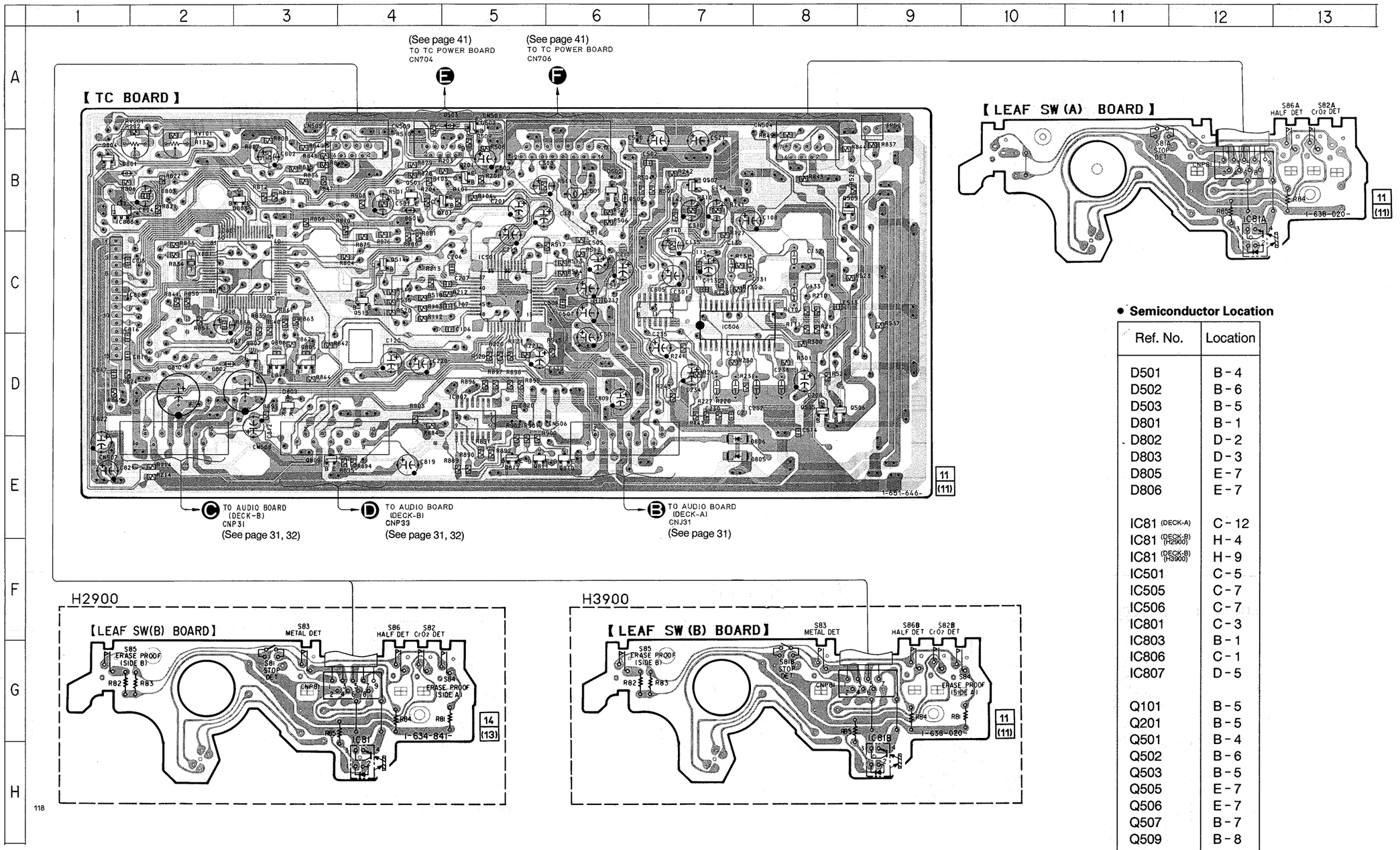


Ⓒ TO TC BOARD CN507 (See page 33)

Ⓓ TO TC BOARD CN508 (See page 33)

4-9. PRINTED WIRING BOARDS —TC Section—

● See page 21 for Circuit Boards Location. ● See page 22 for Semiconductor Lead Layouts.

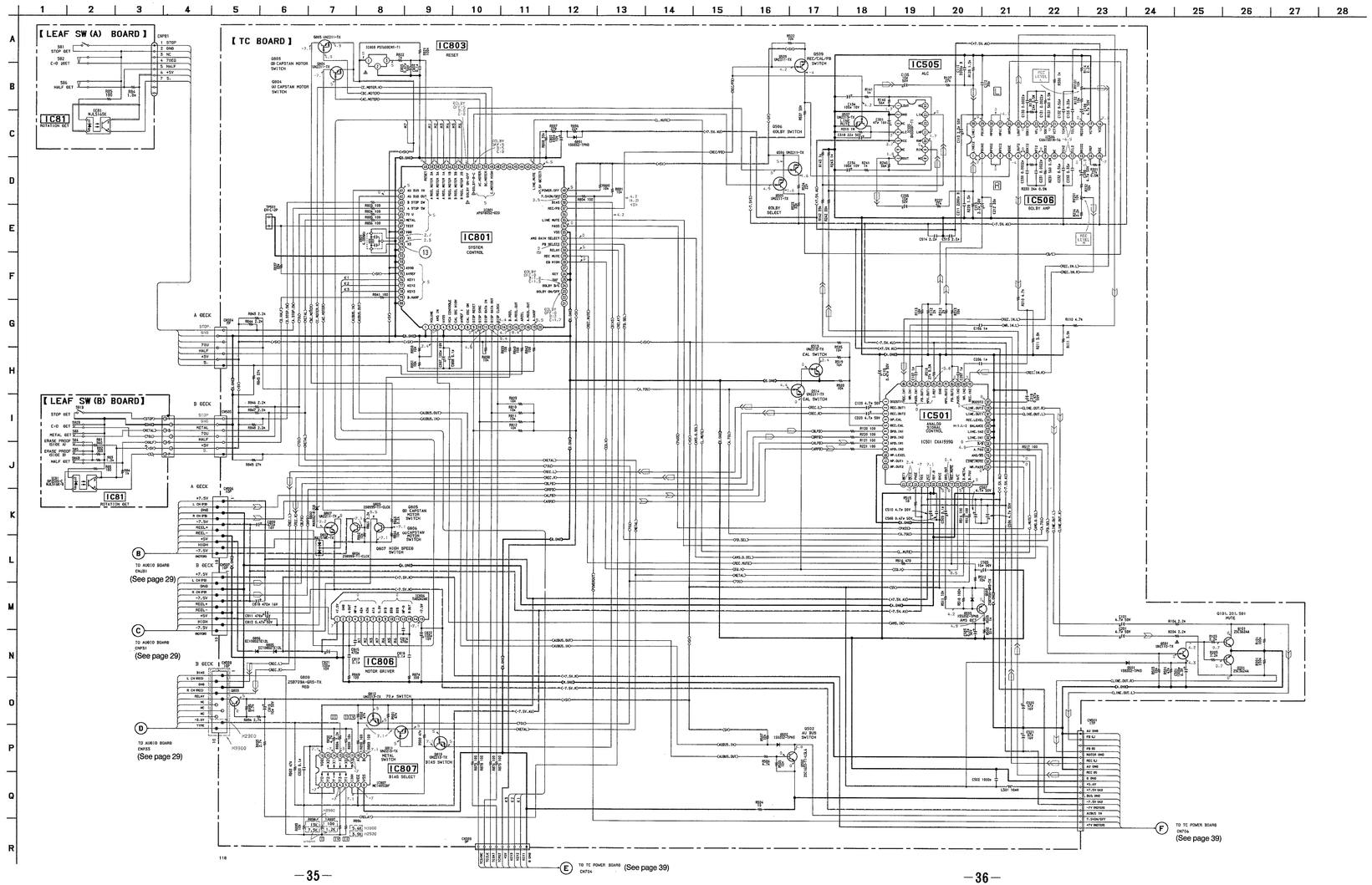


Note:

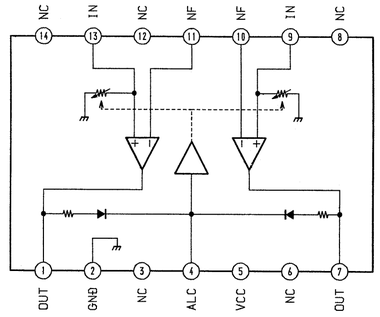
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

● **Semiconductor Location**

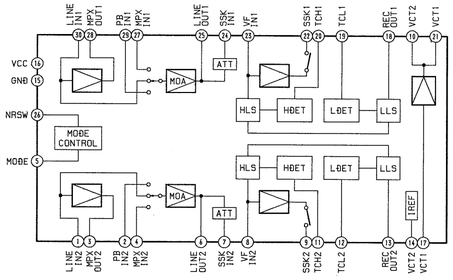
Ref. No.	Location
D501	B - 4
D502	B - 6
D503	B - 5
D801	B - 1
D802	D - 2
D803	D - 3
D805	E - 7
D806	E - 7
IC81 (DECK-A)	C - 12
IC81 (DECK-B) (H2900)	H - 4
IC81 (DECK-B) (H3900)	H - 9
IC501	C - 5
IC505	C - 7
IC506	C - 7
IC801	C - 3
IC803	B - 1
IC806	C - 1
IC807	D - 5
Q101	B - 5
Q201	B - 5
Q501	B - 4
Q502	B - 6
Q503	B - 5
Q505	E - 7
Q506	E - 7
Q507	B - 7
Q509	B - 8
Q513	C - 4
Q514	C - 4
Q803	B - 3
Q804	B - 1
Q805	D - 3
Q806	D - 3
Q807	D - 3
Q809	E - 3
Q810	E - 6
Q811	E - 5
Q812	E - 5

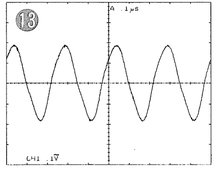


IC505 BA3308F



IC506 CXA1331M



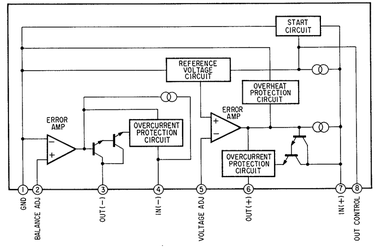


IC801 ⑱
3.72Vp-p
4MHz

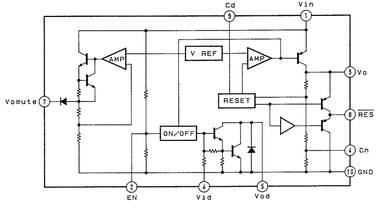
Note:

- All capacitors are in μF unless noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ▭ : B+ Line
- ▭ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no signal (detuned) conditions.
  no mark : STOP
  ( ) : PLAY
  < > : REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB (DECK A)
  ▷ : PB (DECK B)
  ▷ : REC (DECK B)

IC701 M5230L-A



IC702 LA5601



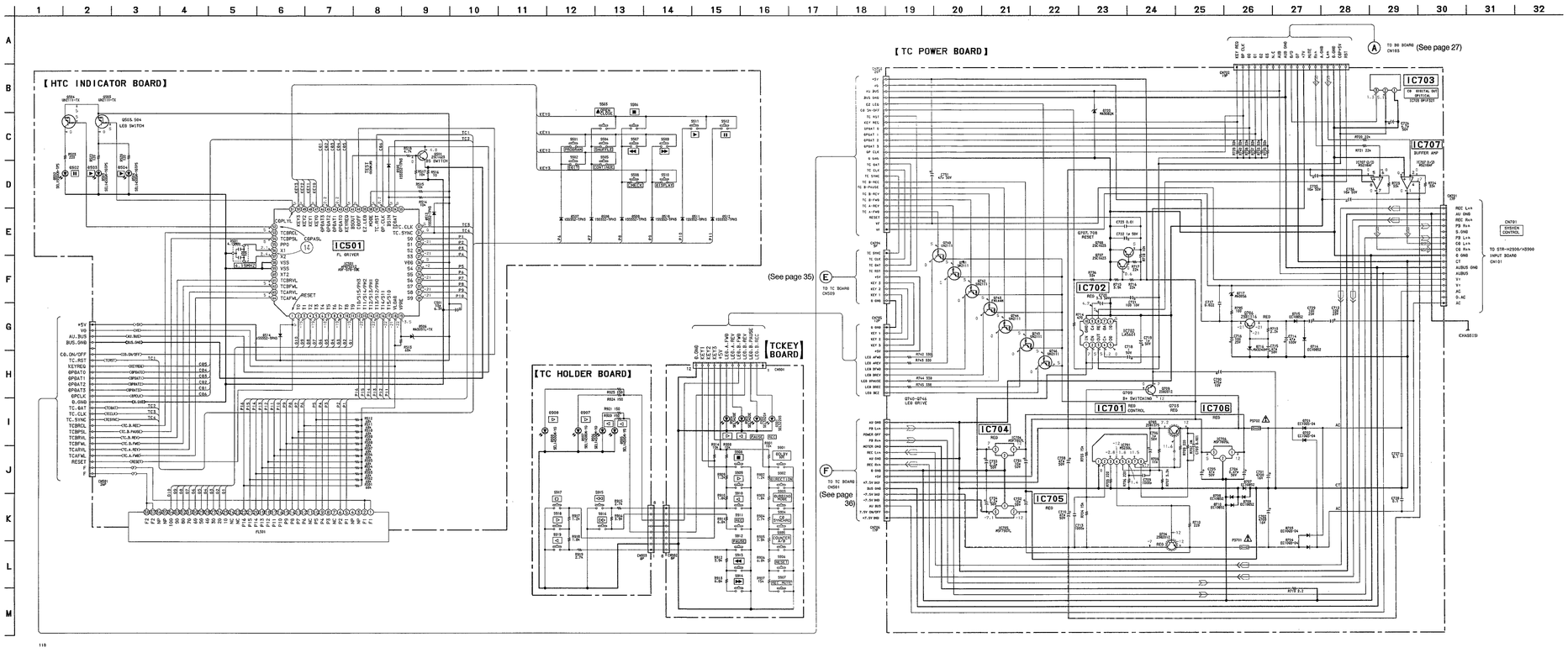
Note:

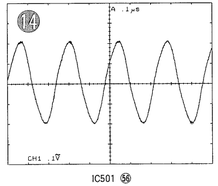
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ⊕ ═══ : B+ Line
- ⊖ ═══ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB (DECK A) ▷ : CD
  ▷» : REC (DECK B)

4-11. SCHEMATIC DIAGRAM —TC KEY Section—





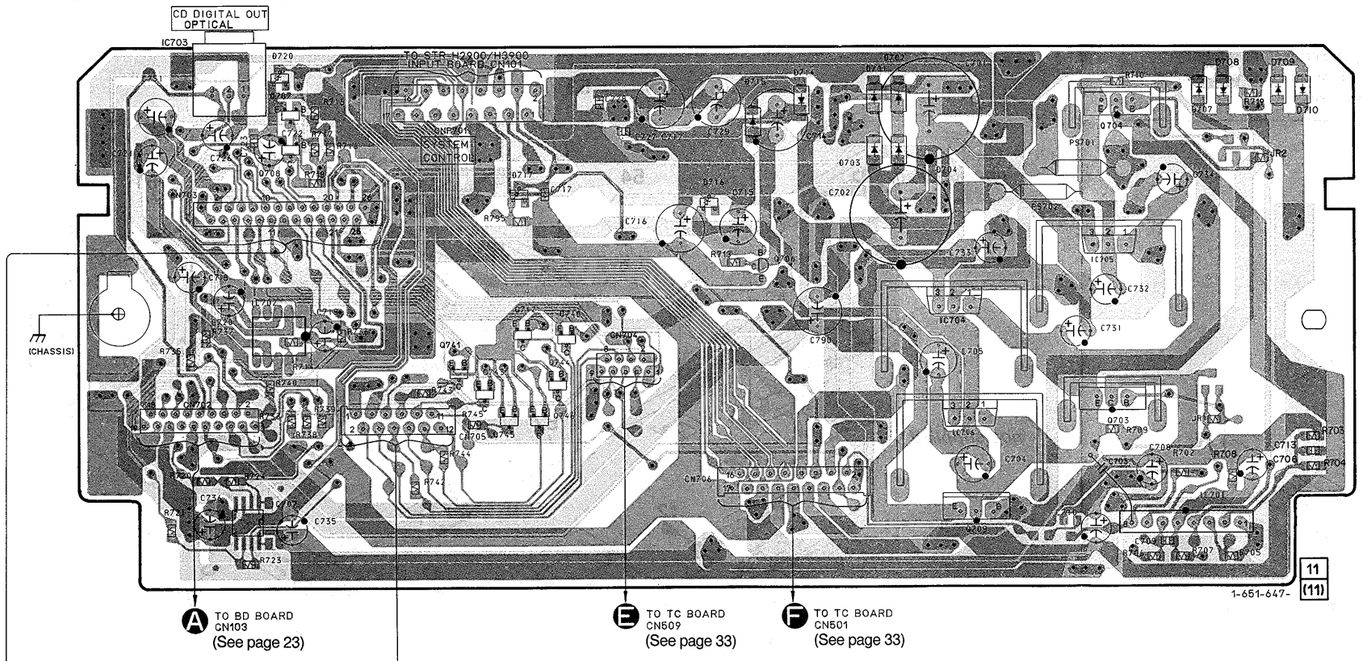
IC501 (54)
4.17Vp-p
4.19MHz

4-12. PRINTED WIRING BOARDS —TC KEY Section—

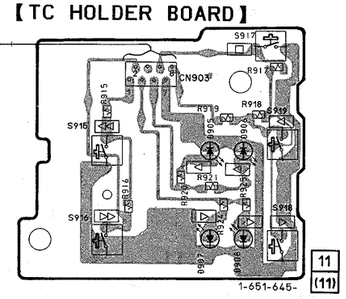
● See page 21 for Circuit Boards Location.

● See page 22 for Semiconductor Lead Layouts.

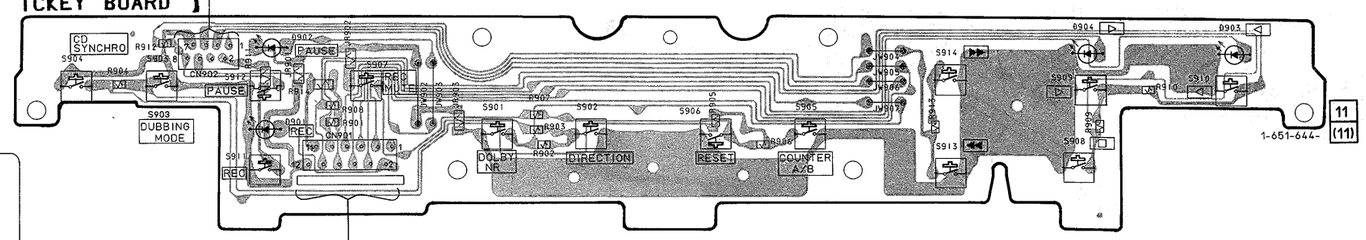
【TC POWER BOARD】


CD DIGITAL OUT OPTICAL
IC703
TO STR-H2900/H3900 INPUT BOARD CN401
SYSTEM CONTROL
(CHASSIS)
A TO BD BOARD CN103 (See page 23)
E TO TC BOARD CN509 (See page 33)
F TO TC BOARD CN501 (See page 33)
1-651-647-
11 (11)

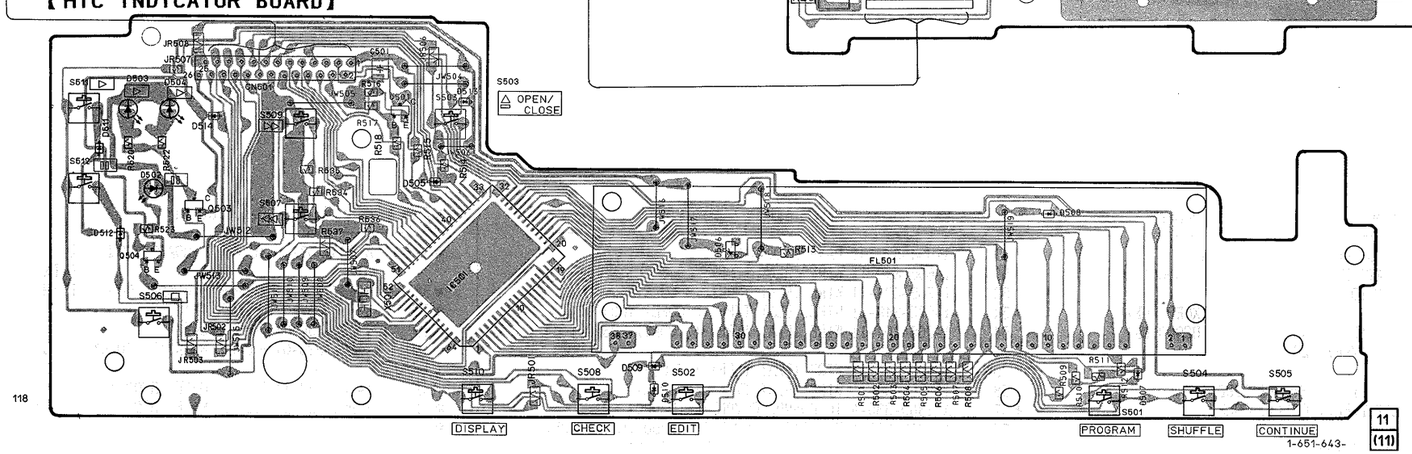
【TC HOLDER BOARD】



【TCKEY BOARD】



【HTC INDICATOR BOARD】



Note:

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

● **Semiconductor Location**

Ref. No.	Location
D502	H-2
D503	G-2
D504	G-2
D505	H-4
D506	H-5
D507	I-8
D508	H-8
D509	I-5
D510	I-5
D511	H-1
D512	H-1
D513	G-4
D514	G-2
D701	A-6
D702	A-7
D703	B-6
D704	B-7
D707	A-9
D708	A-9
D709	A-9
D710	A-9
D714	A-6
D715	A-6
D716	B-5
D717	B-4
D720	A-2
D901	F-6
D902	F-6
D903	F-13
D904	F-12
D905	C-12
D906	C-12
D907	D-12
D908	D-12
IC501	H-4
IC701	D-8
IC702	C-2
IC703	A-2
IC704	C-7
IC705	B-8
IC706	C-7
IC707	D-2
Q501	G-3
Q503	H-2
Q504	H-2
Q703	C-8
Q704	A-8
Q706	B-6
Q707	A-3
Q708	B-3
Q709	D-7
Q740	C-4
Q741	C-4
Q742	C-4
Q743	C-4
Q744	C-4
Q745	D-4
Q746	D-4

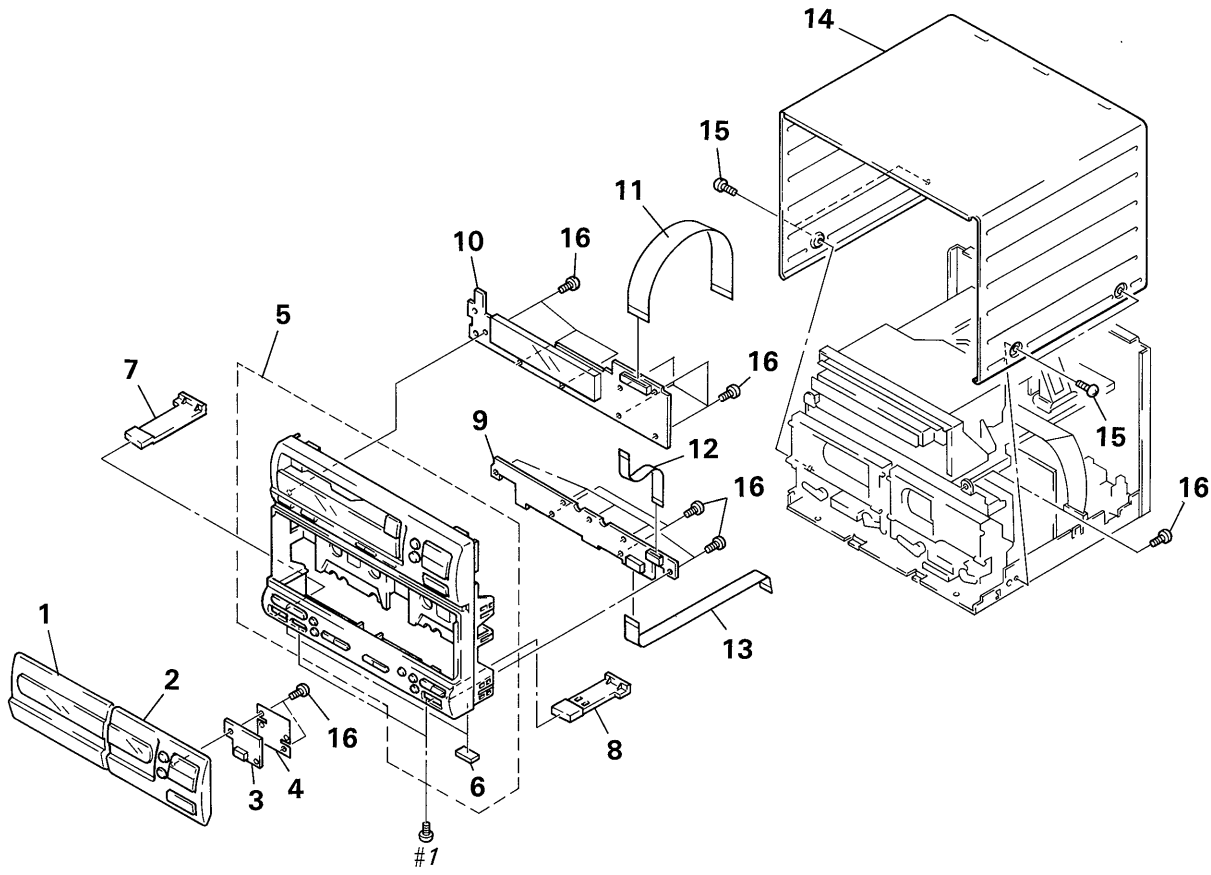
SECTION 5
EXPLODED VIEWS

NOTE:

- –XX,–X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  G : German

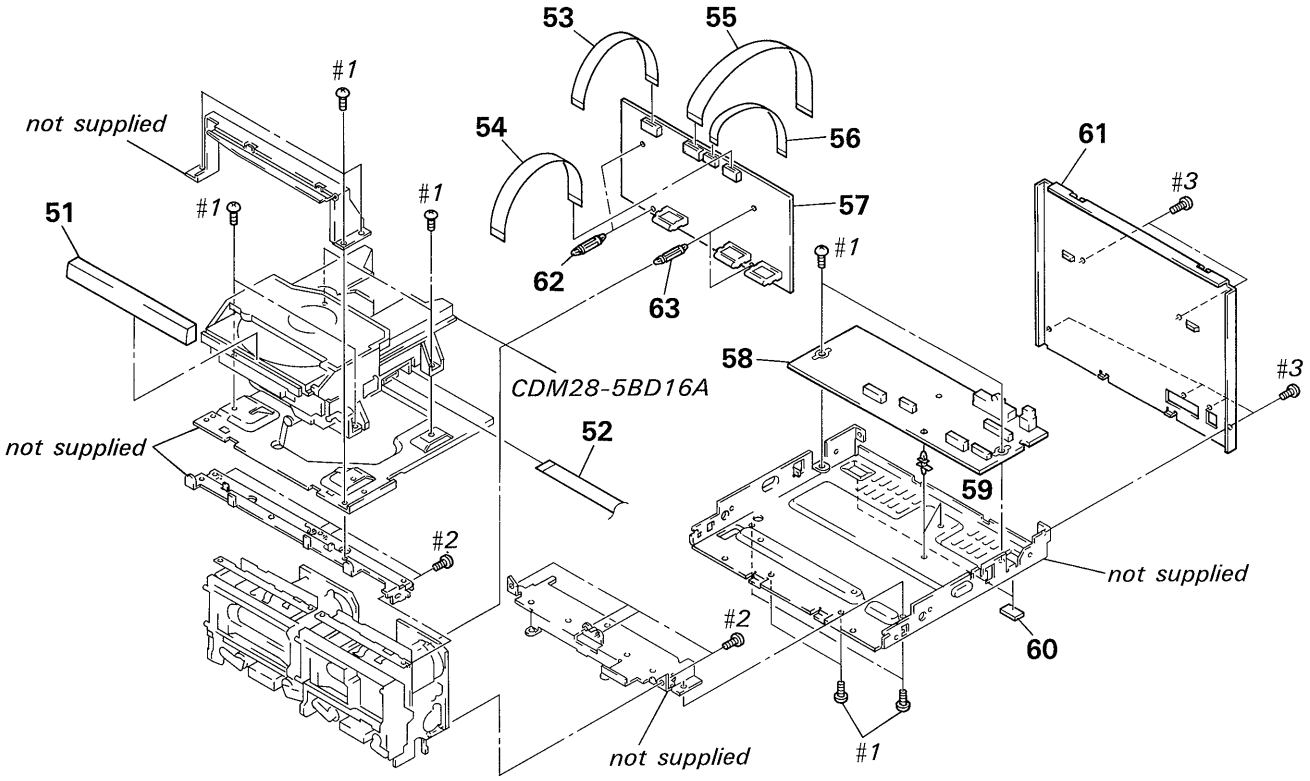
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. FRONT PANEL SECTION



Ref.No.	Part No.	Description	Remark
1	X-4944-624-1	LID (A) ASSY, CASSETTE (H3900)	
1	X-4944-625-1	LID (A) ASSY, CASSETTE (H2900)	
2	X-4944-336-1	LID (B) ASSY, CASSETTE	
*3	1-651-645-11	TC HOLDER BOARD	
4	4-964-818-01	COVER, HOLDER	
5	X-4944-620-1	PANEL ASSY, FRONT	
6	4-930-336-61	FOOT (FELT)	
7	4-964-828-01	BUTTON (EJECT A)	
8	4-964-829-01	BUTTON (EJECT B)	
*9	A-4369-342-A	TCKEY BOARD, COMPLETE (H3900)	
*9	A-4369-385-A	TCKEY BOARD, COMPLETE (H2900:EXCEPT UK)	
*9	A-4369-386-A	TCKEY BOARD, COMPLETE (H2900:UK)	
*10	A-4369-340-A	HTC INDICATION BOARD, COMPLETE (H3900)	
*10	A-4369-379-A	HTC INDICATION BOARD, COMPLETE (H2900:EXCEPT UK)	
*10	A-4369-380-A	HTC INDICATION BOARD, COMPLETE(H2900:UK)	
11	1-696-891-11	WIRE (FLAT TYPE) (26 CORE)	
12	1-765-122-11	WIRE (FLAT TYPE) (FFC)(8 CORE)	
13	1-765-123-11	WIRE (FLAT TYPE)(FFC)(12 CORE)	
14	4-964-824-01	CASE	
15	3-363-099-01	SCREW (CASE 3 TP2)	
16	4-951-620-01	SCREW (2.6X8), +BVTP	

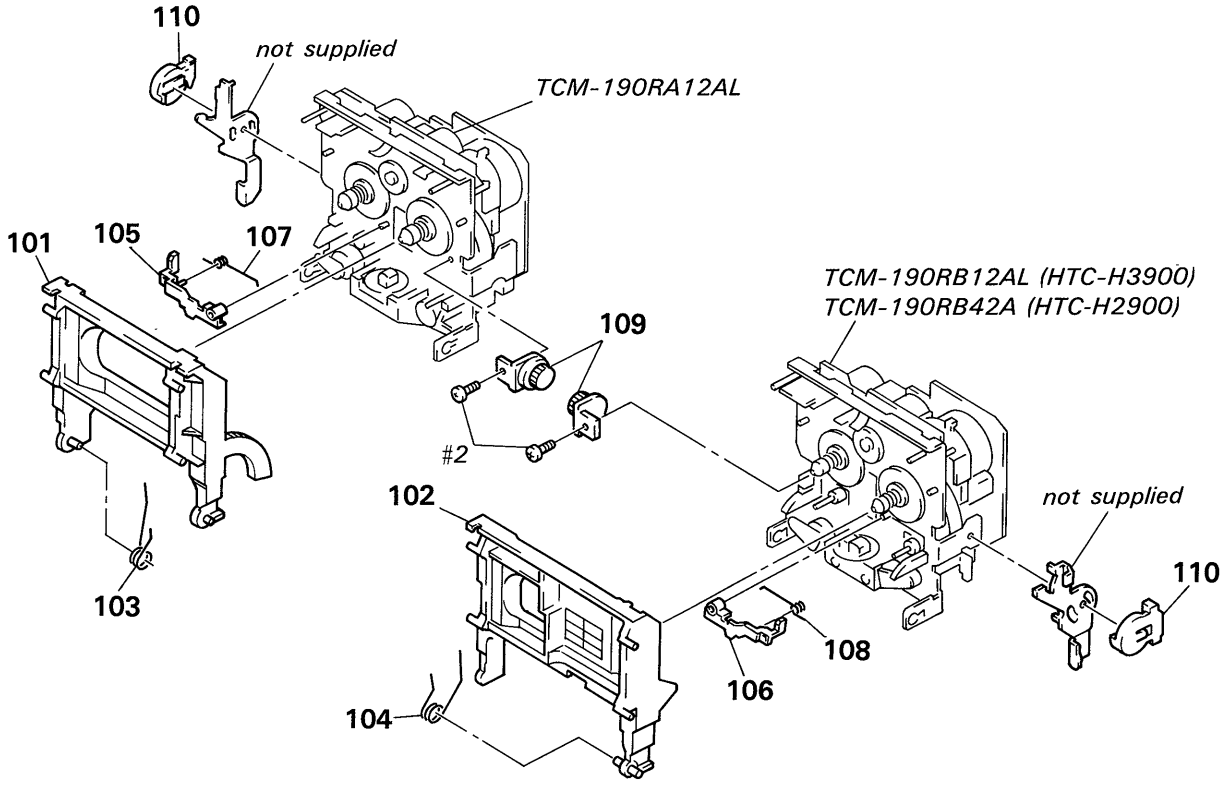
5-2. CHASSIS SECTION



Ref.No.	Part No.	Description	Remark
51	4-964-827-01	PANEL, LOADING	
52	1-696-890-11	WIRE (FLAT TYPE) (19 CORE)	
53	1-765-404-11	WIRE (FLAT TYPE) (7 CORE)	
54	1-575-849-11	WIRE, FLAT TYPE (9 CORE) (H2900)	
54	1-765-404-11	WIRE (FLAT TYPE) (7 CORE) (H3900)	
55	1-690-907-11	WIRE (FLAT TYPE) (17 CORE)	
56	1-696-888-11	WIRE (FLAT TYPE) (9 CORE)	
*57	A-4369-336-A	TC BOARD, COMPLETE (H3900)	
*57	A-4369-375-A	TC BOARD, COMPLETE (H2900:EXCEPT UK)	
*57	A-4369-376-A	TC BOARD, COMPLETE (H2900:UK)	
*58	A-4369-338-A	TC POWER BOARD, COMPLETE (H3900)	

Ref.No.	Part No.	Description	Remark
*58	A-4369-377-A	TC POWER BOARD, COMPLETE (H2900:EXCEPT UK)	
*58	A-4369-378-A	TC POWER BOARD, COMPLETE (H2900:UK)	
*59	3-350-857-01	HOLDER (A), PCB	
60	4-930-336-61	FOOT (FELT)	
*61	4-964-823-01	PANEL, BACK (H2900:EXCEPT G)	
*61	4-964-823-11	PANEL, BACK (H2900:G)	
*61	4-964-823-21	PANEL, BACK (H3900:EXCEPT G)	
*61	4-964-823-31	PANEL, BACK (H3900:G)	
*62	3-682-419-21	HOLDER, P.C.B	
*63	3-682-419-31	HOLDER, P.C.B	

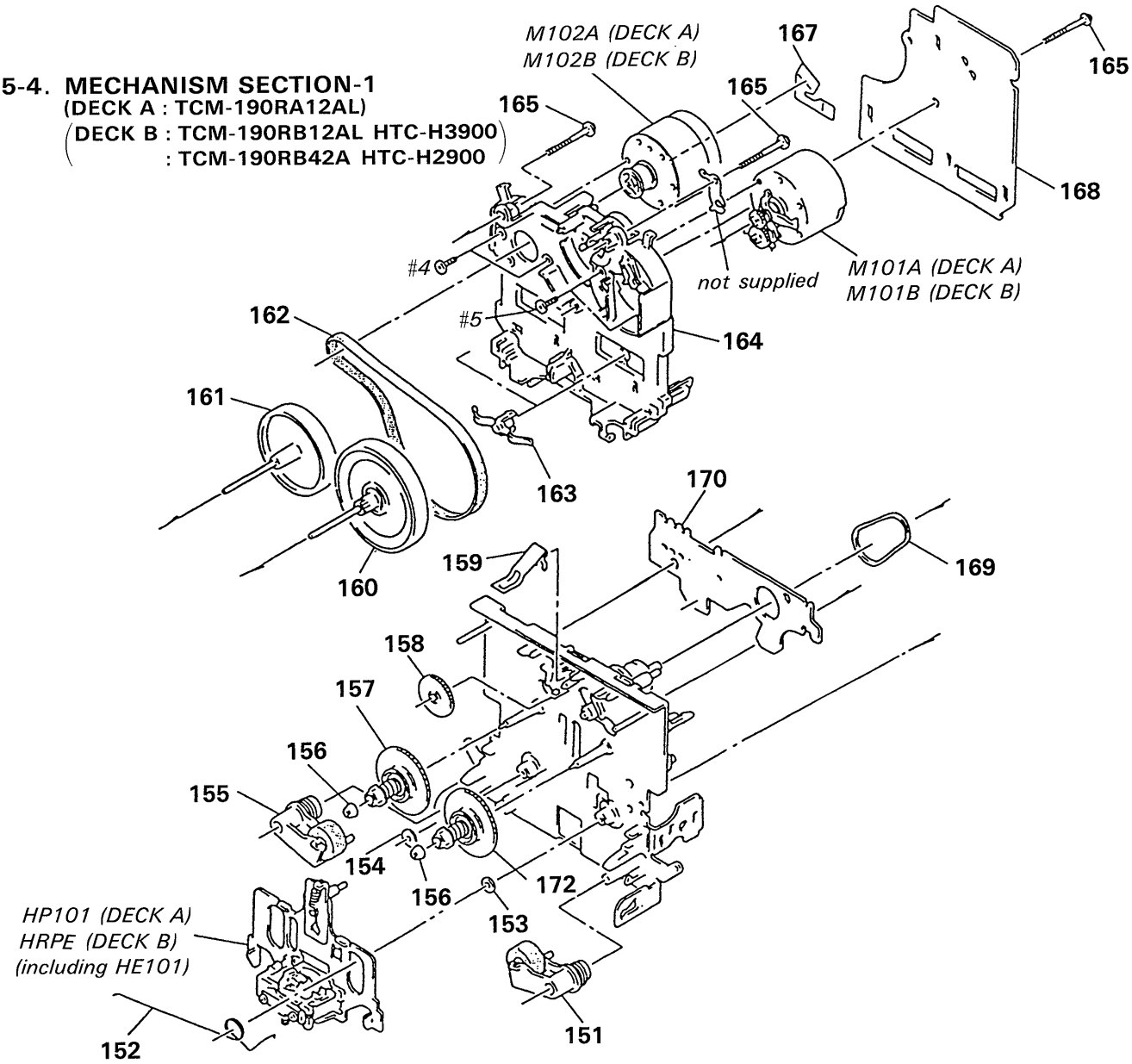
5-3. MECHANISM DECK CHASSIS SECTION



Ref.No.	Part No.	Description	Remark
101	X-4944-338-1	HOLDER (L) ASSY, CASSETTE	
102	X-4944-339-1	HOLDER (R) ASSY, CASSETTE	
103	4-959-231-01	SPRING (L), TORSION	
104	4-959-232-01	SPRING (R), TORSION	
105	3-354-955-01	LEVER (EJ SAFTY LEVER L)	

Ref.No.	Part No.	Description	Remark
106	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
107	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
108	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
109	3-354-963-01	DAMPER	
110	3-354-957-01	JOINT (LOCK LEVER)	

5-4. MECHANISM SECTION-1
(DECK A : TCM-190RA12AL)
(DECK B : TCM-190RB12AL HTC-H3900)
(DECK B : TCM-190RB42A HTC-H2900)

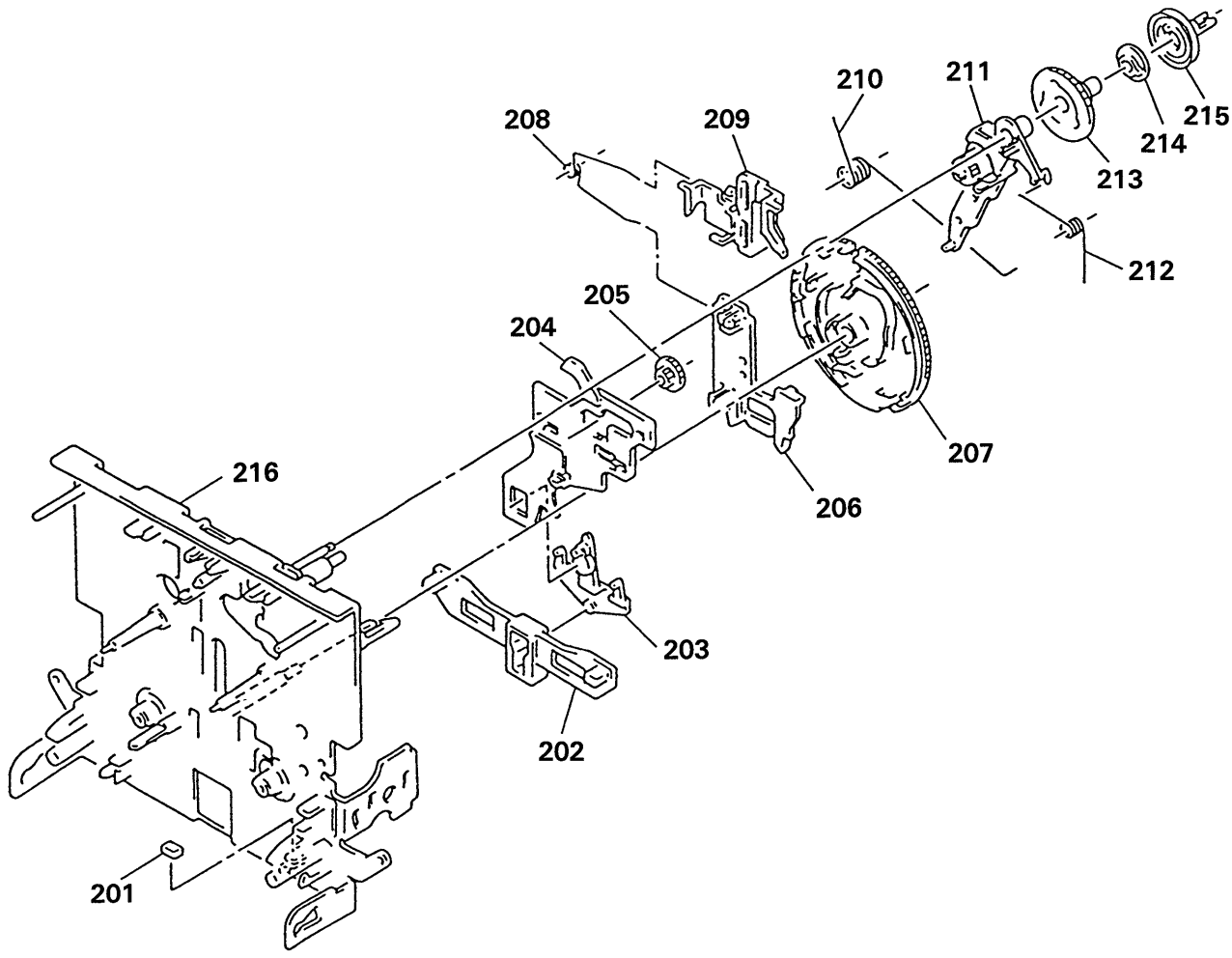


Ref.No.	Part No.	Description	Remark
151	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	(H2900:DECK B)
151	X-3366-047-1	LEVER (PINCH F) ASSY	(DECK A/H3900:DECK B)
152	3-907-362-01	SPRING, TORSION	
153	3-356-713-01	WASHER	
154	3-356-714-01	WASHER	
155	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	(H2900:DECK B)
155	X-3366-048-1	LEVER (PINCH R) ASSY	(DECK A/H3900:DECK B)
156	3-362-308-01	CAP (REEL) (H2900:DECK B)	
156	3-913-841-01	CAP (REEL) (DECK A/H3900:DECK B)	
157	X-3362-078-1	TABLE ASSY, REEL (H2900:DECK B)	
157	X-3366-971-1	TABLE ASSY (B), REEL	(DECK A/H3900:DECK B)
158	3-359-424-01	GEAR (REV GEAR)	
159	3-359-430-01	SPRING(CASSETTE RETAINER),LEAF	
160	X-3359-406-1	FLYWHEEL (FWD) ASSY(H2900:DECK A)	
160	X-3367-629-1	FLYWHEEL (FWD) ASSY(DECK A/H3900:DECK B)	
161	X-3359-410-1	FLYWHEEL (REV) ASSY(H2900:DECK A)	
161	X-3367-630-2	FLYWHEEL (REV) ASSY(DECK A/H3900:DECK B)	
162	3-359-417-01	BELT (FLAT), CAPSTAN	
163	3-575-321-00	RETAINER, THRUST, CAPSTAN	

Ref.No.	Part No.	Description	Remark
*164	3-359-436-01	BASE (THRUST RETAINER),FITTING	(H2900:DECK B)
164	3-359-436-11	BASE (THRUST RETAINER),FITTING	(DECK A/H3900:DECK B)
165	3-359-414-01	SCREW (+PTPWH 2X23)	
167	1-638-983-11	MOTOR FLEXIBLE BOARD	
*168	A-2007-102-A	AUDIO BOARD, COMPLETE (H2900:DECK B)	
*168	A-2007-265-A	AUDIO BOARD, COMPLETE (H3900:DECK B)	
*168	A-2007-266-A	AUDIO BOARD, COMPLETE (DECK A)	
169	3-359-466-01	BELT (FR), SQUARE	
*170	1-638-020-11	LEAF SW (A) BOARD (DECK A)	
*170	1-638-020-11	LEAF SW (A) BOARD (H2900:DECK B)	
*170	1-634-841-14	LEAF SW (B) BOARD (H2900:DECK B)	
172	X-3359-404-1	TABLE (A) ASSY, REEL (H2900:DECK B)	
172	X-3366-970-1	TABLE ASSY, REEL (DECK A/H3900:DECK B)	
HP101	A-2003-757-A	BASE ASSY, HEAD (DECK A)	
HRPE101	A-2003-838-F	DECK ASSY, HEAD (H2900:DECK B)	
HRPE101	A-2003-930-A	BASE ASSY, HEAD (H3900:DECK B)	
M101A	X-3363-501-2	MOTOR ASSY (REEL)	
M102A	X-3365-377-1	MOTOR ASSY (CAPSTAN)	
M101B	X-3363-501-2	MOTOR ASSY (REEL)	
M102B	X-3365-377-1	MOTOR ASSY (CAPSTAN)	

5-5. MECHANISM SECTION-2

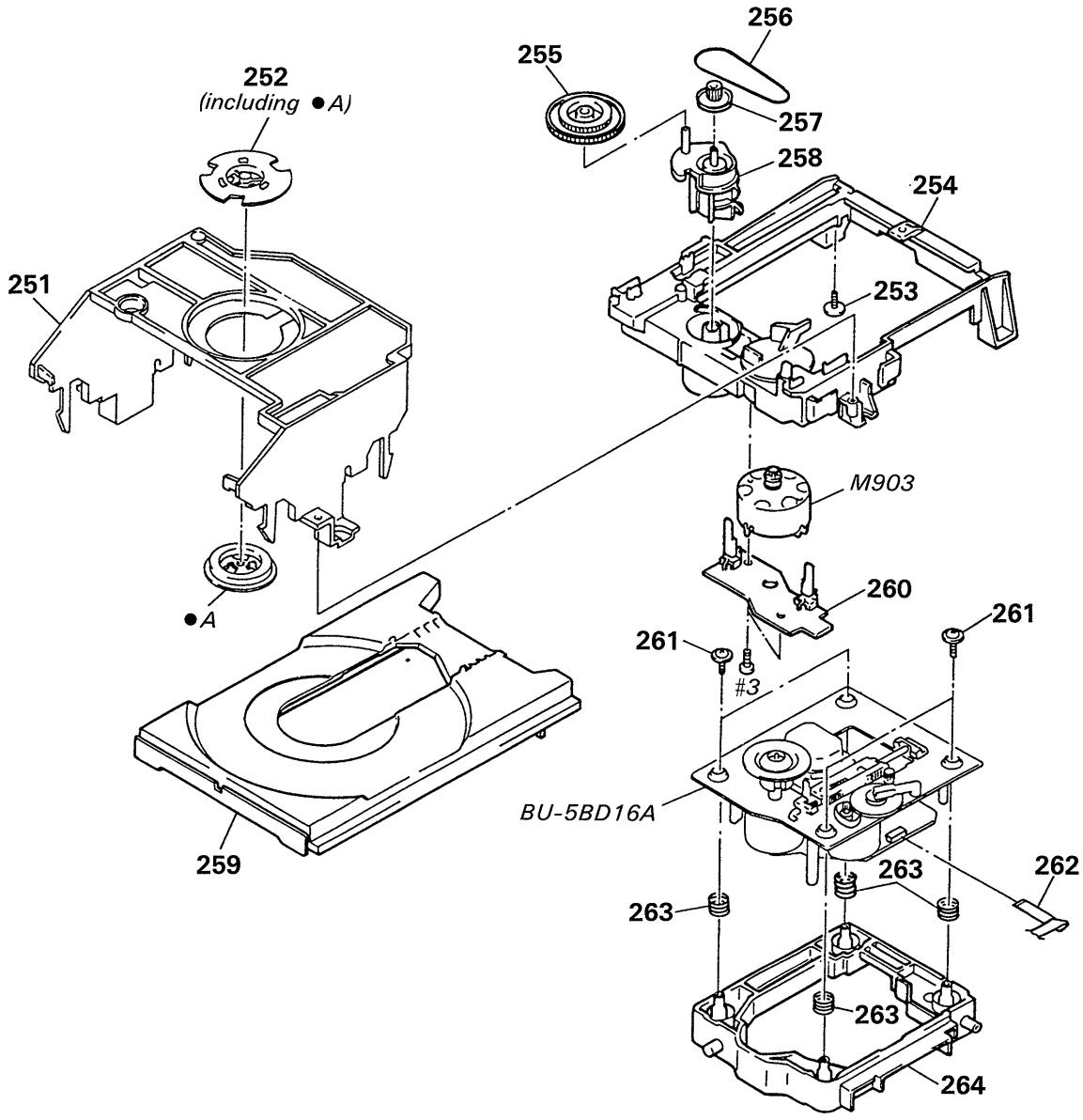
(DECK A : TCM-190RA12AL)
(DECK B : TCM-190RB12AL HTC-H3900)
(DECK B : TCM-190RB42A HTC-H2900)



Ref.No.	Part No.	Description	Remark
201	3-359-469-01	SPACER	
*202	3-359-425-01	SLIDER (REVERSE SLIDER)	
203	3-359-426-01	LEVER (REVERSE LEVER)	
*204	3-359-415-01	SLIDER (TRIGGER SLIDER)	
205	3-359-448-01	GEAR (TRIGGER)	
*206	3-359-427-01	SLIDER (LEVERSE SLIDER)	
207	3-359-420-01	GEAR (CAM GEAR)	
208	3-359-454-01	SPRING, TORSION	
209	3-359-429-01	SLIDER (BRAKE PLATE)	
210	3-359-456-01	SPRING(TRIGGER SPRING),TORSION	

Ref.No.	Part No.	Description	Remark
211	X-3359-405-1	LEVER (FR ARM) ASSY(H2900:DECK B)	
211	X-3366-569-1	ARM ASSY, FR (DECK A/H3900:DECK B)	
212	3-359-453-01	SPRING (FR ARM), TORSION	
213	3-359-419-01	GEAR (FR GEAR) (H2900:DECK B)	
213	3-359-419-11	GEAR (FR GEAR) (DECK A/H3900:DECK B)	
214	3-359-421-01	CLUTCH (REEL DISK)	
215	3-359-418-01	PULLEY (FR PULLEY) (H2900:DECK B)	
215	3-359-418-11	PULLEY (FR PULLEY) (DECK A/H3900:DECK B)	
216	X-3363-790-1	CHASSIS ASSY, MECHANICAL (H2900:DECK B)	
216	X-3359-415-1	CHASSIA ASSY, MECHANICAL (DECK A/H3900:DECK B)	

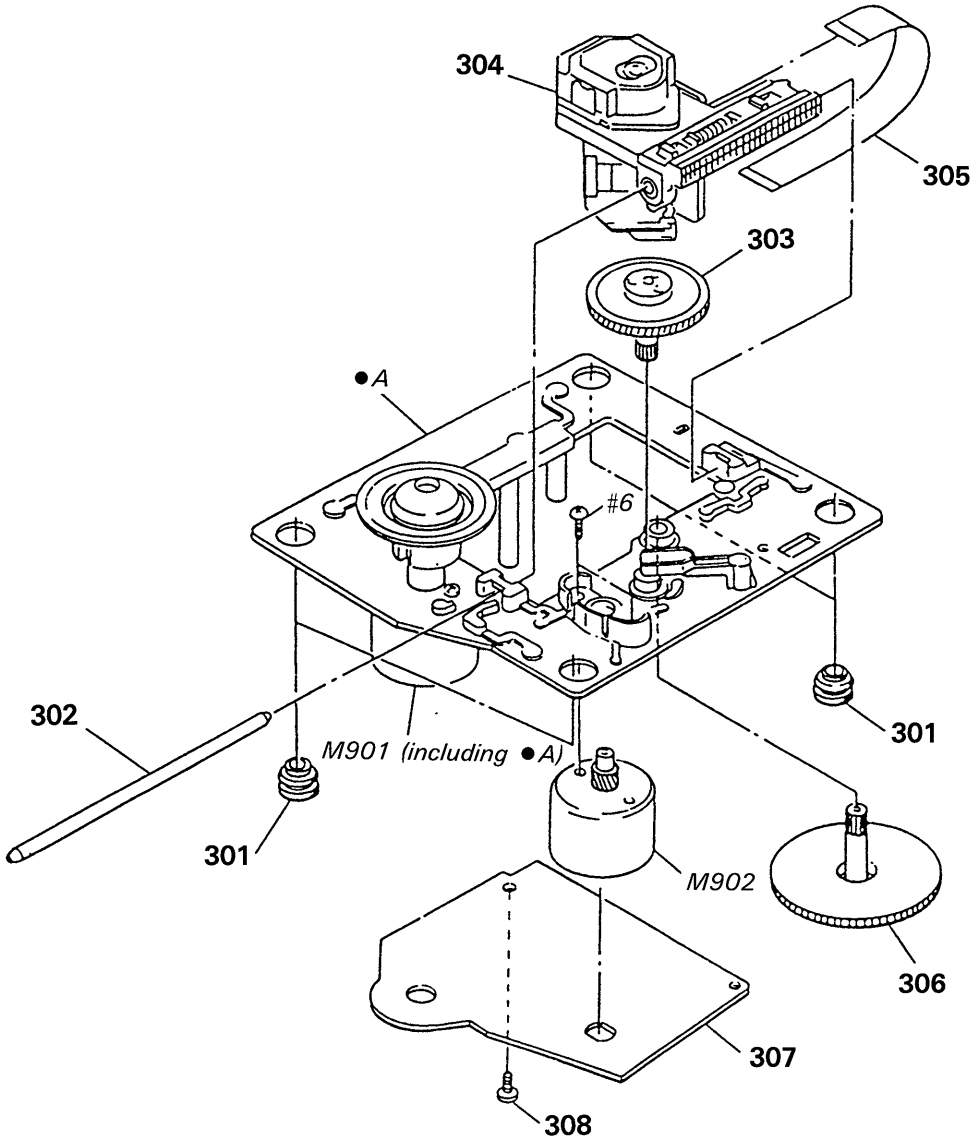
5-6. CD MECHANISM SECTION-1
(CDM28-5BD16A)



Ref.No.	Part No.	Description	Remark
*251	4-960-835-01	HOLDER (M)	
252	1-452-719-11	MAGNET ASSY	
*253	4-917-583-21	BRACKET, YOKE	
*254	4-960-838-03	BASE (MD)	
255	4-960-842-01	GEAR (P)	
256	4-927-649-01	BELT	
257	4-960-841-01	PULLEY (S)	
*258	4-960-839-01	CAM	

Ref.No.	Part No.	Description	Remark
*259	4-960-836-01	TABLE, DISC	
*260	1-650-836-11	LOADING BOARD	
261	4-933-134-01	SCREW (+PTPWH M2.6X6)	
262	1-751-806-11	WIRE (FLAT TYPE) (5 CORE)	
263	4-959-996-01	SPRING (932), COMPRESSION	
*264	4-960-834-01	HOLDER (BU)	
M903	A-4604-363-A	MOTOR (L) ASSY	

5-7. CD MECHANISM SECTION-2
(BU-5BD16A)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark
301	4-951-940-01	INSULATOR (BU)	
302	4-917-565-01	SHAFT, SLED	
303	4-917-567-01	GEAR (M)	
⚠304	8-848-144-11	DEVICE, OPTICAL KSS-240A	
305	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
306	4-917-564-01	GEAR (P), FLATNESS	
307	A-4673-069-A	BD BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	
M901	X-4917-504-1	MOTOR ASSY (SLED)	
M902	X-4917-523-3	MOTOR ASSY (SPINDLE)	

SECTION 6
ELECTRICAL PARTS LIST

AUDIO (DECK A) AUDIO (DECK B: H2900)

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- –XX and –X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA··· : μA···, uPA··· : μPA···, uPB··· : μPB···, uPC··· : μPC···, uPD··· : μPD···
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviations
  G : German
  IT : Italian

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description			Remark
*	A-2006-623-A	AUDIO BOARD, COMPLETE (DECK A)			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
		< CONNECTOR >			
*CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
*CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P			
*CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P			
*CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW51	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW52	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW53	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW54	1-216-296-91	METAL GLAZE	0	5%	1/8W
		< TRANSISTOR >			
Q71	8-729-216-22	TRANSISTOR 2SA1162-G			

Ref.No.	Part No.	Description			Remark
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R74	1-216-089-91	METAL GLAZE	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-241-761-11	RES, ADJ, CARBON 1K			
RV21	1-241-761-11	RES, ADJ, CARBON 1K			
RV71	1-241-630-11	RES, ADJ, CARBON 10K			
RV72	1-241-630-11	RES, ADJ, CARBON 10K			
**********					
*	A-2007-102-A	AUDIO BOARD, COMPLETE (DECK B) (H2900)			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C13	1-136-153-00	FILM	0.01uF	5%	50V
C14	1-126-177-11	ELECT	100uF	20%	10V
C15	1-124-234-00	ELECT	22uF	20%	16V
C16	1-136-434-11	FILM	120PF	5%	630V
C17	1-164-080-11	CERAMIC	390PF	10%	50V
C18	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C23	1-136-153-00	FILM	0.01uF	5%	50V
C24	1-126-177-11	ELECT	100uF	20%	10V
C25	1-124-234-00	ELECT	22uF	20%	16V

Ref.No.	Part No.	Description			Remark
C26	1-136-434-11	FILM	120PF	5%	630V
C27	1-164-080-11	CERAMIC	390PF	10%	50V
C28	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C53	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C54	1-136-601-11	FILM	0.01uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C72	1-124-499-11	ELECT	1uF	20%	50V
		< CONNECTOR >			
*CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
*CNP31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
*CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
*CNP33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
*CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CNP72	1-764-902-11	CONNECTOR, FFC/FPC 4P			
		< IC >			
IC31	8-759-249-21	IC uPC1330AGR			
IC32	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW11	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW12	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW13	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW14	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW15	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW16	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW17	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW18	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW19	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW20	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW21	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW22	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW23	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW24	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW25	1-216-296-91	METAL GLAZE	0	5%	1/8W

Ref.No.	Part No.	Description			Remark
		< COIL >			
L11	1-410-780-11	INDUCTOR	27mH		
L21	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q51	8-729-808-01	TRANSISTOR	2SD1622-S		
Q52	8-729-808-01	TRANSISTOR	2SD1622-S		
Q53	8-729-808-01	TRANSISTOR	2SD1622-S		
Q71	8-729-602-36	TRANSISTOR	2SA1602		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-033-00	METAL CHIP	220	5%	1/10W
R13	1-216-081-00	METAL CHIP	22K	5%	1/10W
R14	1-216-075-00	METAL CHIP	12K	5%	1/10W
R15	1-216-107-00	METAL CHIP	270K	5%	1/10W
⚠R16	1-249-430-11	CARBON	12K	5%	1/4W F
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-081-00	METAL CHIP	22K	5%	1/10W
R24	1-216-075-00	METAL CHIP	12K	5%	1/10W
R25	1-216-107-00	METAL CHIP	270K	5%	1/10W
⚠R26	1-249-430-11	CARBON	12K	5%	1/4W F
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
⚠R41	1-249-393-11	CARBON	10	5%	1/4W F
⚠R42	1-249-393-11	CARBON	10	5%	1/4W F
R51	1-216-079-00	METAL CHIP	18K	5%	1/10W
R52	1-216-079-00	METAL CHIP	18K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R74	1-216-089-91	METAL GLAZE	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-241-761-11	RES, ADJ, CARBON 1K			
RV12	1-238-551-11	RES, ADJ, CARBON 220K			
RV21	1-241-761-11	RES, ADJ, CARBON 1K			
RV22	1-238-551-11	RES, ADJ, CARBON 220K			
		< TRANSFORMER >			
T51	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

AUDIO (DECK B: H3900)

Ref.No.	Part No.	Description			Remark
*	A-2007-040-A	AUDIO BOARD, COMPLETE (DECK B) (H3900)			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C52	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C53	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C54	1-136-601-11	FILM	0.01uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C71	1-164-346-11	CERAMIC CHIP	1uF		16V
C80	1-124-234-00	ELECT	22uF	20%	16V
C81	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C82	1-136-157-00	FILM	0.022uF	5%	50V
C83	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C84	1-136-478-11	FILM	470PF	5%	630V
C85	1-136-433-11	FILM	100PF	5%	630V
C86	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C87	1-136-273-91	FILM	75PF	5%	630V
C88	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C89	1-124-234-00	ELECT	22uF	20%	16V
C90	1-107-584-11	CERAMIC	4PF	0.25PF	500V
C91	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C92	1-136-157-00	FILM	0.022uF	5%	50V
C93	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C94	1-136-478-11	FILM	470PF	5%	630V
C95	1-136-433-11	FILM	100PF	5%	630V
C96	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C97	1-136-273-91	FILM	75PF	5%	630V
C98	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C99	1-164-005-11	CERAMIC CHIP	0.47uF		25V
		< CONNECTOR >			
*CNP31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
*CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
*CNP33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
*CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
*CNP72	1-580-411-11	SOCKET, CONNECTOR 4P			

Ref.No.	Part No.	Description			Remark
		< DIODE >			
D31	8-719-404-46	DIODE MA110			
		< IC >			
IC31	8-759-106-02	IC uPC4570G2			
IC81	8-759-106-56	IC uPC1297CA			
		< COIL >			
L81	1-410-780-11	INDUCTOR	27mH		
L91	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q51	8-729-808-01	TRANSISTOR	2SD1622-S		
Q52	8-729-808-01	TRANSISTOR	2SD1622-S		
Q53	8-729-808-01	TRANSISTOR	2SD1622-S		
Q71	8-729-216-22	TRANSISTOR	2SA1162-G		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R33	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R51	1-216-097-00	METAL CHIP	100K	5%	1/10W
R52	1-216-097-00	METAL CHIP	100K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R57	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R74	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R81	1-216-073-00	METAL CHIP	10K	5%	1/10W
R82	1-216-085-00	METAL CHIP	33K	5%	1/10W
R83	1-216-001-00	METAL CHIP	10	5%	1/10W
R84	1-216-101-00	METAL CHIP	150K	5%	1/10W
R85	1-216-075-00	METAL CHIP	12K	5%	1/10W
R91	1-216-073-00	METAL CHIP	10K	5%	1/10W
R92	1-216-085-00	METAL CHIP	33K	5%	1/10W
R93	1-216-001-00	METAL CHIP	10	5%	1/10W

Ref.No.	Part No.	Description			Remark
R94	1-216-101-00	METAL CHIP	150K	5%	1/10W
R95	1-216-075-00	METAL CHIP	12K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-241-761-11	RES, ADJ, CARBON 1K			
RV21	1-241-761-11	RES, ADJ, CARBON 1K			
RV71	1-241-630-11	RES, ADJ, CARBON 10K			
RV72	1-241-630-11	RES, ADJ, CARBON 10K			
RV81	1-241-786-11	RES, ADJ, CARBON 22K			
RV91	1-241-786-11	RES, ADJ, CARBON 22K			
		< RELAY >			
RY31	1-515-913-11	RELAY			
		< TRANSFORMER >			
T51	1-406-417-11	COIL, BIAS OSCILLATION			
T81	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR			
T91	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR			
		< TEST PIN >			
*TP81	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P			
**********					
*	A-4673-069-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-607-11	ELECT CHIP	47uF	20%	4V
C106	1-126-607-11	ELECT CHIP	47uF	20%	4V
C107	1-126-607-11	ELECT CHIP	47uF	20%	4V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C115	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V

Ref.No.	Part No.	Description			Remark
C152	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C154	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C201	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C202	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C203	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C204	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C207	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C299	1-164-346-11	CERAMIC CHIP	1uF		16V
C301	1-164-346-11	CERAMIC CHIP	1uF		16V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C304	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C305	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C306	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C307	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C308	1-164-346-11	CERAMIC CHIP	1uF		16V
C309	1-164-346-11	CERAMIC CHIP	1uF		16V
C310	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C311	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C312	1-164-346-11	CERAMIC CHIP	1uF		16V
C313	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C401	1-164-232-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN101	1-580-858-11	SOCKET, CONNECTOR (SMT) 5P			
CN102	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P			
CN103	1-580-872-41	SOCKET, CONNECTOR (SMT) 19P			
		< DIODE >			
D101	8-719-422-12	DIODE MA8039			
D201	8-719-016-74	DIODE 1SS352			
		< IC >			
IC101	8-752-058-77	IC CXA1372AQ			
IC102	8-759-823-48	IC LA6525M			
IC103	8-759-636-20	IC M54641FP-TP			
IC201	8-752-351-78	IC CXD2500BQ			
IC202	8-759-248-71	IC uPD75116GF-J06-3BE			

BD

Ref.No.	Part No.	Description			Remark
IC203	8-759-098-27	IC MSM6538-01GS-VKR1			
IC301	8-759-155-52	IC PCM-67U-B			
IC302	8-759-996-43	IC RC4558PS			
		< JUMPER RESISTOR >			
JW201	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW203	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW205	1-216-295-00	METAL CHIP	0	5%	1/10W
JW206	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW207	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW208	1-216-295-00	METAL CHIP	0	5%	1/10W
JW209	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW210	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW211	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW212	1-216-296-91	METAL GLAZE	0	5%	1/8W
JW215	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-805-45	TRANSISTOR	2SC3395		
Q201	8-729-602-21	TRANSISTOR	2SC4154		
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-236-427-11	NETWORK, RES	18K		
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W

Ref.No.	Part No.	Description			Remark
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W
R205	1-216-097-00	METAL CHIP	100K	5%	1/10W
R208	1-216-033-00	METAL CHIP	220	5%	1/10W
R209	1-216-081-00	METAL CHIP	22K	5%	1/10W
R212	1-239-039-11	RESISTOR, NETWORK (22K 1608)			
R214	1-239-039-11	RESISTOR, NETWORK (22K 1608)			
R218	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R219	1-216-073-00	METAL CHIP	10K	5%	1/10W
R220	1-216-001-00	METAL CHIP	10	5%	1/10W
R222	1-236-427-11	NETWORK, RES	18K		
R223	1-216-081-00	METAL CHIP	22K	5%	1/10W
R224	1-216-081-00	METAL CHIP	22K	5%	1/10W
R225	1-216-081-00	METAL CHIP	22K	5%	1/10W
R226	1-216-081-00	METAL CHIP	22K	5%	1/10W
R230	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R231	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R232	1-216-041-00	METAL CHIP	470	5%	1/10W
R233	1-216-041-00	METAL CHIP	470	5%	1/10W
R234	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R235	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R236	1-236-413-11	NETWORK, RES	1.2K		
R301	1-236-413-11	NETWORK, RES	1.2K		
R303	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R304	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R305	1-216-097-00	METAL CHIP	100K	5%	1/10W
R306	1-216-097-00	METAL CHIP	100K	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-241-395-11	RES, ADJ, METAL GLAZE 10K			
RV102	1-241-395-11	RES, ADJ, METAL GLAZE 10K			
		< SWITCH >			
SW101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X201	1-579-280-11	VIBRATOR, CRYSTAL (16MHz)			
X202	1-579-216-11	VIBRATOR, CERAMIC (4.0MHz)			

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Ref.No.	Part No.	Description			Remark
*	A-4369-340-A	HTC INDICATOR BOARD, COMPLETE (H3900)			
*	A-4369-380-A	HTC INDICATOR BOARD, COMPLETE (H2900:UK)			
*	A-4369-379-A	HTC INDICATOR BOARD, COMPLETE (H2900: EXCEPT UK)			
		**********			
		< CAPACITOR >			
C501	1-135-157-21	ELECT	10uF	20% 6.3V	
		< CONNECTOR >			
CN501	1-580-473-11	SOCKET, CONNECTOR 26P			
		< DIODE >			
D502	8-719-048-34	LED	SEL1950KM-TP5 (❚❚)		
D503	8-719-048-33	LED	SEL1450GM-YG(TP5) (▶)		
D504	8-719-048-33	LED	SEL1450GM-YG(TP5) (▶)		
D505	8-719-016-74	DIODE	1SS352		
D506	8-719-402-01	DIODE	MA3091L-TX		
D507	8-719-016-74	DIODE	1SS352		
D508	8-719-016-74	DIODE	1SS352		
D509	8-719-016-74	DIODE	1SS352		
D510	8-719-016-74	DIODE	1SS352		
D511	8-719-016-74	DIODE	1SS352		
D512	8-719-016-74	DIODE	1SS352		
D513	8-719-016-74	DIODE	1SS352		
D514	8-719-016-74	DIODE	1SS352		
		< FILTER >			
FL501	1-517-293-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC501	8-759-248-72	IC	uPD75212AGF-578-3BE		
		< JUMPER RESISTOR >			
JR501	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JR502	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JR503	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JR506	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JR507	1-216-295-91	METAL GLAZE	0	5% 1/10W	
JR508	1-216-296-91	METAL GLAZE	0	5% 1/8W	
		< TRANSISTOR >			
Q501	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q503	8-729-424-08	TRANSISTOR	UN2111		
Q504	8-729-424-08	TRANSISTOR	UN2111		

Ref.No.	Part No.	Description			Remark
		< RESISTOR >			
R501	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R502	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R503	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R504	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R505	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R506	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R507	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R508	1-216-242-91	METAL GLAZE	68K	5% 1/8W	
R509	1-216-093-00	METAL CHIP	68K	5% 1/10W	
R510	1-216-093-00	METAL CHIP	68K	5% 1/10W	
R511	1-216-093-00	METAL CHIP	68K	5% 1/10W	
R512	1-216-093-00	METAL CHIP	68K	5% 1/10W	
R513	1-216-093-00	METAL CHIP	68K	5% 1/10W	
R514	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R515	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R516	1-216-001-00	METAL CHIP	10	5% 1/10W	
R517	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R518	1-216-065-00	METAL CHIP	4.7K	5% 1/10W	
R520	1-216-037-00	METAL CHIP	330	5% 1/10W	
R522	1-216-037-00	METAL CHIP	330	5% 1/10W	
R523	1-216-037-00	METAL CHIP	330	5% 1/10W	
		< SWITCH >			
S501	1-572-184-11	SWITCH, KEYBOARD (PROGRAM)			
S502	1-572-184-11	SWITCH, KEYBOARD (EDIT)			
S503	1-572-184-11	SWITCH, KEYBOARD (⏏ OPEN/CLOSE)			
S504	1-572-184-11	SWITCH, KEYBOARD (SHUFFLE)			
S505	1-572-184-11	SWITCH, KEYBOARD (CONTINUE)			
S506	1-572-184-11	SWITCH, KEYBOARD (■)			
S507	1-572-184-11	SWITCH, KEYBOARD (◀◀)			
S508	1-572-184-11	SWITCH, KEYBOARD (CHECK)			
S509	1-572-184-11	SWITCH, KEYBOARD (▶▶)			
S510	1-572-184-11	SWITCH, KEYBOARD (DISPLAY)			
S511	1-572-184-11	SWITCH, KEYBOARD (▶)			
S512	1-572-184-11	SWITCH, KEYBOARD (❚❚)			
		< VIBRATOR >			
X501	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)			
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*	1-638-020-11	LEAF SW (A) BOARD			
		**********			
		< CONNECTOR >			
*CNP81	1-568-850-11	SOCKET, CONNECTOR 7P			

LEAF SW (A) | LEAF SW (B) | LOADING | TC

Ref.No.	Part No.	Description			Remark
		< IC >			
IC81	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)			
		< RESISTOR >			
R84	1-249-417-11	CARBON	1K	5% 1/4W	
R85	1-249-408-11	CARBON	180	5% 1/4W	
		< SWITCH >			
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)			
S82	1-571-281-21	SWITCH, LEAF (Cro DET)			
S86	1-571-281-21	SWITCH, LEAF (HALF DET)			
**********					
*	1-638-020-11	LEAF SW (B) BOARD (H3900)			
*	1-634-841-14	LEAF SW (B) BOARD (H2900)			
		**********			
		< CONNECTOR >			
*CNP81	1-568-850-11	SOCKET, CONNECTOR 7P (H3900)			
*CNP81	1-568-852-11	SOCKET, CONNECTOR 9P (H2900)			
		< IC >			
IC81	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)			
		< RESISTOR >			
R81	1-249-414-11	CARBON	560	5% 1/4W	
R82	1-247-818-11	CARBON	300	5% 1/4W	
R83	1-247-834-11	CARBON	1.3K	5% 1/4W	
R84	1-249-417-11	CARBON	1K	5% 1/4W	
R85	1-249-408-11	CARBON	180	5% 1/4W	
		< SWITCH >			
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)			
S82	1-571-281-21	SWITCH, LEAF (CrO DET)			
S83	1-571-281-21	SWITCH, LEAF (METAL DET)			
S84	1-571-281-21	SWITCH, LEAF (A ERASE PROOF)			
S85	1-571-281-21	SWITCH, LEAF (B ERASE PROOF)			
S86	1-571-281-21	SWITCH, LEAF (HALF DET)			
**********					
*	1-650-836-11	LOADING BOARD			
		**********			
		< CONNECTOR >			
CN291	1-580-918-11	HOUSING, CONNECTOR 5P			

Ref.No.	Part No.	Description			Remark
		< SWITCH >			
S291	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S292	1-572-086-11	SWITCH, LEAF (LOAD IN)			
**********					
		A-4369-336-A TC BOARD, COMPLETE (H3900)			
		A-4369-376-A TC BOARD, COMPLETE (H2900:UK)			
		A-4369-375-A TC BOARD, COMPLETE (H2900:EXCEPT UK)			
		**********			
*	3-309-144-21	HEAT SINK			
*	4-880-403-11	HEAT SINK			
	7-682-547-09	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C101	1-124-927-11	ELECT	4.7uF	20% 100V	
C106	1-164-346-11	CERAMIC CHIP	1uF	16V	
C107	1-164-346-11	CERAMIC CHIP	1uF	16V	
C108	1-124-927-11	ELECT	4.7uF	20% 100V	
C111	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V	
C112	1-163-107-00	CERAMIC CHIP	39PF	5% 50V	
C113	1-124-925-11	ELECT	2.2uF	20% 100V	
C119	1-124-902-00	ELECT	0.47uF	20% 50V	
C120	1-124-927-11	ELECT	4.7uF	20% 100V	
C130	1-130-475-00	MYLAR	0.0022uF	5% 50V	
C131	1-130-475-00	MYLAR	0.0022uF	5% 50V	
C132	1-136-174-00	FILM	0.56uF	5% 50V	
C133	1-136-171-00	FILM	0.33uF	5% 50V	
C134	1-124-443-00	ELECT	100uF	20% 10V	
C135	1-124-907-11	ELECT	10uF	20% 50V	
C201	1-124-927-11	ELECT	4.7uF	20% 100V	
C206	1-164-346-11	CERAMIC CHIP	1uF	16V	
C207	1-164-346-11	CERAMIC CHIP	1uF	16V	
C208	1-124-927-11	ELECT	4.7uF	20% 100V	
C211	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V	
C212	1-163-107-00	CERAMIC CHIP	39PF	5% 50V	
C213	1-124-925-11	ELECT	2.2uF	20% 100V	
C219	1-124-902-00	ELECT	0.47uF	20% 50V	
C220	1-124-927-11	ELECT	4.7uF	20% 100V	
C230	1-130-475-00	MYLAR	0.0022uF	5% 50V	
C231	1-130-475-00	MYLAR	0.0022uF	5% 50V	
C232	1-136-174-00	FILM	0.56uF	5% 50V	
C233	1-136-171-00	FILM	0.33uF	5% 50V	
C234	1-124-443-00	ELECT	100uF	20% 10V	
C235	1-124-907-11	ELECT	10uF	20% 50V	

Ref.No.	Part No.	Description			Remark
C301	1-124-477-11	ELECT	47uF	20%	25V
C310	1-124-916-11	ELECT	22uF	20%	63V
C501	1-124-471-00	ELECT	1000uF	20%	6.3V
C502	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C503	1-124-925-11	ELECT	2.2uF	20%	100V
C505	1-124-907-11	ELECT	10uF	20%	50V
C506	1-124-927-11	ELECT	4.7uF	20%	100V
C507	1-124-927-11	ELECT	4.7uF	20%	100V
C508	1-124-902-00	ELECT	0.47uF	20%	50V
C509	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C510	1-124-927-11	ELECT	4.7uF	20%	100V
C513	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C514	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C520	1-124-477-11	ELECT	47uF	20%	25V
C521	1-124-477-11	ELECT	47uF	20%	25V
C802	1-124-443-00	ELECT	100uF	20%	10V
C803	1-124-902-00	ELECT	0.47uF	20%	50V
C804	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C807	1-124-443-00	ELECT	100uF	20%	10V
C808	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C809	1-126-103-11	ELECT	470uF	20%	16V
C810	1-126-103-11	ELECT	470uF	20%	16V
C811	1-126-103-11	ELECT	470uF	20%	16V
C812	1-124-465-00	ELECT	0.47uF	20%	50V
C815	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C816	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C817	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C818	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C819	1-124-907-11	ELECT	10uF	20%	50V
C820	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C821	1-124-443-00	ELECT	100uF	20%	10V
C822	1-124-443-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN501	1-568-860-11	SOCKET, CONNECTOR 17P			
CN504	1-750-585-11	CONNECTOR, FFC/FPC 7P			
CN505	1-750-585-11	CONNECTOR, FFC/FPC 7P (H3900)			
CN505	1-573-101-11	SOCKET, CONNECTOR (NON ZIF) 9P (H2900)			
CN506	1-580-783-11	CONNECTOR, BOARD TO BOARD			
CN507	1-580-783-11	CONNECTOR, BOARD TO BOARD			
CN508	1-580-783-11	CONNECTOR, BOARD TO BOARD			
*CN509	1-580-480-11	SOCKET, CONNECTOR 9P			
		< DIODE >			
D501	8-719-016-74	DIODE 1SS352			
D502	8-719-016-74	DIODE 1SS352			
D503	8-719-016-74	DIODE 1SS352			
D801	8-719-016-74	DIODE 1SS352			
D802	8-719-420-14	DIODE MA8082-M			

Ref.No.	Part No.	Description	Remark
D803	8-719-801-78	DIODE 1SS184	
D805	8-719-210-33	DIODE EC10DS2	
D806	8-719-210-33	DIODE EC10DS2	
		< IC >	
IC501	8-752-058-57	IC CXA1599Q	
IC505	8-759-998-71	IC BA3308F	
IC506	8-752-037-90	IC CXA1331M	
IC801	8-759-259-60	IC uPD78052-020	
IC803	8-759-067-97	IC PST600CMT	
IC806	8-759-266-35	IC TA8242AK	
IC807	8-759-009-06	IC MC14052BF	
		< COIL >	
L501	1-410-470-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q101	8-729-422-29	TRANSISTOR 2SD601A-S	
Q201	8-729-422-29	TRANSISTOR 2SD601A-S	
Q501	8-729-424-38	TRANSISTOR UN2110	
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q503	8-729-216-22	TRANSISTOR 2SA1162-G	
Q505	8-729-421-22	TRANSISTOR UN2211	
Q506	8-729-421-22	TRANSISTOR UN2211	
Q507	8-729-421-19	TRANSISTOR UN2213	
Q509	8-729-421-22	TRANSISTOR UN2211	
Q513	8-729-421-19	TRANSISTOR UN2213	
Q514	8-729-421-22	TRANSISTOR UN2211	
Q803	8-729-421-22	TRANSISTOR UN2211	
Q804	8-729-421-22	TRANSISTOR UN2211	
Q805	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q806	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q807	8-729-421-22	TRANSISTOR UN2211	
Q809	8-729-216-22	TRANSISTOR 2SA1162-G	
Q810	8-729-421-19	TRANSISTOR UN2213	
Q811	8-729-421-19	TRANSISTOR UN2213	
Q812	8-729-421-19	TRANSISTOR UN2213	
		< RESISTOR >	
R101	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R103	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R104	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R110	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R111	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R112	1-216-056-00	METAL GLAZE 2K 5% 1/10W	
R113	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R114	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R120	1-216-025-00	METAL CHIP 100 5% 1/10W	
R121	1-216-025-00	METAL CHIP 100 5% 1/10W	

TC

Ref.No.	Part No.	Description				Remark
R127	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R128	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R130	1-216-684-91	METAL CHIP	24K	0.50%	1/10W	
R131	1-216-645-11	METAL CHIP	560	0.5%	1/10W	
R132	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R140	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R141	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R142	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R143	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R201	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R203	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R204	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R210	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R211	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R212	1-216-056-00	METAL GLAZE	2K	5%	1/10W	
R213	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R214	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R220	1-216-025-00	METAL CHIP	100	5%	1/10W	
R221	1-216-025-00	METAL CHIP	100	5%	1/10W	
R227	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R228	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R230	1-216-684-91	METAL CHIP	24K	0.50%	1/10W	
R231	1-216-645-11	METAL CHIP	560	0.5%	1/10W	
R232	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R240	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R241	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R242	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R243	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R300	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R301	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	
R310	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R501	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R504	1-216-001-00	METAL CHIP	10	5%	1/10W	
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R506	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R508	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R509	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R510	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R511	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R512	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R513	1-216-025-00	METAL CHIP	100	5%	1/10W	
R514	1-216-025-00	METAL CHIP	100	5%	1/10W	
R515	1-216-007-00	METAL CHIP	18	5%	1/10W	
R516	1-216-041-00	METAL CHIP	470	5%	1/10W	
R517	1-216-025-00	METAL CHIP	100	5%	1/10W	
R518	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	
R519	1-216-078-00	METAL GLAZE	16K	5%	1/10W	

Ref.No.	Part No.	Description				Remark
R520	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R522	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R523	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R524	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R535	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R537	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R804	1-216-025-00	METAL CHIP	100	5%	1/10W	
R806	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R807	1-216-035-00	METAL CHIP	270	5%	1/10W	
R808	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R809	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R810	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R811	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R812	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R821	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R822	1-216-049-00	METAL CHIP	1K'	5%	1/10W	
R833	1-216-025-00	METAL CHIP	100	5%	1/10W	
R834	1-216-025-00	METAL CHIP	100	5%	1/10W	
R835	1-216-025-00	METAL CHIP	100	5%	1/10W	
R836	1-216-025-00	METAL CHIP	100	5%	1/10W	
R837	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R838	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R839	1-216-025-00	METAL CHIP	100	5%	1/10W	
R840	1-216-025-00	METAL CHIP	100	5%	1/10W	
R841	1-216-025-00	METAL CHIP	100	5%	1/10W	
R842	1-216-025-00	METAL CHIP	100	5%	1/10W	
R843	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R844	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R845	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R846	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R847	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R848	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R849	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R850	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R851	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R861	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R862	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R863	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R864	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R869	1-216-025-00	METAL CHIP	100	5%	1/10W	
R874	1-216-025-00	METAL CHIP	100	5%	1/10W	
R875	1-216-025-00	METAL CHIP	100	5%	1/10W	
R876	1-216-025-00	METAL CHIP	100	5%	1/10W	
R878	1-216-025-00	METAL CHIP	100	5%	1/10W	
R879	1-216-025-00	METAL CHIP	100	5%	1/10W	
R880	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R881	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R884	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	

Ref.No.	Part No.	Description			Remark
R889	1-216-025-00	METAL CHIP	100	5%	1/10W
R890	1-216-025-00	METAL CHIP	100	5%	1/10W
R891	1-216-079-00	METAL CHIP	18K	5%	1/10W
R892	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R893	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R894	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R895	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R896	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (H3900)
R896	1-216-063-00	METAL CHIP	3.9K	5%	1/10W (H2900)
R897	1-216-025-00	METAL CHIP	100	5%	1/10W (H3900)
R897	1-216-051-00	METAL CHIP	1.2K	5%	1/10W (H2900)
R898	1-216-076-00	METAL CHIP	13K	5%	1/10W (H3900)
R898	1-216-070-00	METAL CHIP	7.5K	5%	1/10W (H2900)
R899	1-216-073-00	METAL CHIP	10K	5%	1/10W
R900	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R901	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R902	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R903	1-216-089-91	METAL GLAZE	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-241-785-11	RES, ADJ, CARBON 10K			
RV201	1-241-785-11	RES, ADJ, CARBON 10K			
		< TEST PIN >			
TP501	1-564-517-11	PLUG, CONNECTOR 2P			
		< VIBRATOR >			
X801	1-577-358-21	VIBRATOR, CERAMIC (4.00MHz)			
**********					
*	1-651-645-11	TC HOLDER BOARD			
		**********			
*	4-956-202-01	HOLDER (FL TUBE)			
		< CONNECTOR >			
*CN903	1-580-481-11	SOCKET, CONNECTOR 8P			
		< DIODE >			
D905	8-719-048-33	LED SEL1450GM-YG(TP5) (◁)			
D906	8-719-048-33	LED SEL1450GM-YG(TP5) (◁)			
D907	8-719-048-33	LED SEL1450GM-YG(TP5) (▷)			
D908	8-719-048-33	LED SEL1450GM-YG(TP5) (▷)			
		< RESISTOR >			
R915	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R916	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R917	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R918	1-216-055-00	METAL CHIP	1.8K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R919	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R920	1-216-037-00	METAL CHIP	330	5%	1/10W
R921	1-216-037-00	METAL CHIP	330	5%	1/10W
R924	1-216-037-00	METAL CHIP	330	5%	1/10W
R925	1-216-037-00	METAL CHIP	330	5%	1/10W
		< SWITCH >			
S915	1-572-184-11	SWITCH, KEYBOARD (⏮)			
S916	1-572-184-11	SWITCH, KEYBOARD (⏭)			
S917	1-572-184-11	SWITCH, KEYBOARD (□)			
S918	1-572-184-11	SWITCH, KEYBOARD (▷)			
S919	1-572-184-11	SWITCH, KEYBOARD (◁)			
**********					
*	A-4369-342-A	TCKEY BOARD, COMPLETE (H3900)			
*	A-4369-386-A	TCKEY BOARD, COMPLETE (H2900:UK)			
*	A-4369-385-A	TCKEY BOARD, COMPLETE (H2900:EXCEPT UK)			
		**********			
		< CONNECTOR >			
CN901	1-691-752-11	SOCKET, CONNECTOR 12P			
*CN902	1-580-481-11	SOCKET, CONNECTOR 8P			
		< DIODE >			
D901	8-719-032-83	LED SEL5220S-TP (REC)			
D902	8-719-033-06	LED SEL5920A (PAUSE)			
D903	8-719-032-87	LED SEL5420S-TP (◁)			
D904	8-719-032-87	LED SEL5420S-TP (▷)			
		< JUMPER RESISTOR >			
JR901	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR902	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR903	1-216-296-91	METAL GLAZE	0	5%	1/8W
		< RESISTOR >			
R901	1-216-073-00	METAL CHIP	10K	5%	1/10W
R902	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R903	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R904	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R905	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R906	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R907	1-216-077-00	METAL CHIP	15K	5%	1/10W
R908	1-216-073-00	METAL CHIP	10K	5%	1/10W
R909	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R910	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R911	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W
R912	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R913	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R914	1-216-222-00	METAL GLAZE	10K	5%	1/8W

TCKEY | TC POWER

Ref.No.	Part No.	Description			Remark
		< SWITCH >			
S901	1-572-184-11	SWITCH, KEYBOARD (DOLBY NR)			
S902	1-572-184-11	SWITCH, KEYBOARD (DIRECTION)			
S903	1-572-184-11	SWITCH, KEYBOARD (DUBBING MODE)			
S904	1-572-184-11	SWITCH, KEYBOARD (CD CYNCHRO)			
S905	1-572-184-11	SWITCH, KEYBOARD (COUNTER A/B)			
S906	1-572-184-11	SWITCH, KEYBOARD (RESET)			
S907	1-572-184-11	SWITCH, KEYBOARD (REC MUTE)			
S908	1-572-184-11	SWITCH, KEYBOARD (■)			
S909	1-572-184-11	SWITCH, KEYBOARD (▷)			
S910	1-572-184-11	SWITCH, KEYBOARD (◁)			
S911	1-572-184-11	SWITCH, KEYBOARD (REC)			
S912	1-572-184-11	SWITCH, KEYBOARD (PAUSE)			
S913	1-572-184-11	SWITCH, KEYBOARD (◀◀)			
S914	1-572-184-11	SWITCH, KEYBOARD (▶▶)			
**********					
*	A-4369-378-A	TC POWER BOARD, COMPLETE (H2900:UK)			
*	A-4369-377-A	TC POWER BOARD, COMPLETE (H2900:EXCEPT UK)			
*	A-4369-338-A	TC POWER BOARD, COMPLETE (H3900)			
		**********			
		< CAPACITOR >			
C701	1-124-898-11	ELECT	4700uF	20%	16V
C702	1-124-898-11	ELECT	4700uF	20%	16V
C703	1-162-294-31	CERAMIC	0.001uF	10%	50V
C704	1-124-902-00	ELECT	0.47uF	20%	50V
C705	1-124-910-11	ELECT	47uF	20%	50V
C706	1-124-903-11	ELECT	1uF	20%	50V
C708	1-124-910-11	ELECT	47uF	20%	50V
C709	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C710	1-124-910-11	ELECT	47uF	20%	50V
C712	1-124-478-11	ELECT	100uF	20%	25V
C713	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C714	1-124-931-11	ELECT	47uF	20%	100V
C715	1-124-910-11	ELECT	47uF	20%	50V
C716	1-124-478-11	ELECT	100uF	20%	25V
C717	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C718	1-124-903-11	ELECT	1uF	20%	50V
C719	1-124-903-11	ELECT	1uF	20%	50V
C720	1-126-962-11	ELECT	3.3uF	20%	50V
C721	1-124-443-00	ELECT	100uF	20%	10V
C722	1-124-903-11	ELECT	1uF	20%	50V
C723	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C726	1-124-927-11	ELECT	4.7uF	20%	100V
C727	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C728	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C729	1-124-478-11	ELECT	100uF	20%	25V
C731	1-124-907-11	ELECT	10uF	20%	50V
C732	1-124-907-11	ELECT	10uF	20%	50V
C733	1-124-925-11	ELECT	2.2uF	20%	100V
C734	1-124-925-11	ELECT	2.2uF	20%	100V
C735	1-124-907-11	ELECT	10uF	20%	50V
C736	1-124-907-11	ELECT	10uF	20%	50V
C751	1-124-910-11	ELECT	47uF	20%	50V
C790	1-124-472-11	ELECT	470uF	20%	10V
		< CONNECTOR >			
CN701	1-569-624-21	SOCKET, CONNECTOR 17P (SYSTEM CONTROL)			
*CN702	1-573-149-11	SOCKET, CONNECTOR 19P			
CN703	1-580-460-21	SOCKET, CONNECTOR 26P			
CN704	1-580-468-21	SOCKET, CONNECTOR 9P			
*CN705	1-568-831-11	SOCKET, CONNECTOR 12P			
*CN706	1-568-836-11	SOCKET, CONNECTOR 17P			
		< DIODE >			
D701	8-719-210-39	DIODE	EC10QS-04		
D702	8-719-210-39	DIODE	EC10QS-04		
D703	8-719-210-39	DIODE	EC10QS-04		
D704	8-719-210-39	DIODE	EC10QS-04		
D707	8-719-210-33	DIODE	EC10DS2		
D708	8-719-210-33	DIODE	EC10DS2		
D709	8-719-210-33	DIODE	EC10DS2		
D710	8-719-210-33	DIODE	EC10DS2		
D714	8-719-210-33	DIODE	EC10DS2		
D715	8-719-210-33	DIODE	EC10DS2		
D716	8-719-403-03	DIODE	MA3240H-TX		
D717	8-719-105-91	DIODE	RD5.6M-B2		
D720	8-719-401-92	DIODE	MA3082M		
		< IC >			
IC701	8-759-602-66	IC	M5230L-A		
IC702	8-759-821-93	IC	LA5601		
IC703	8-749-921-12	IC	GP1F32T (CD DIGITAL OUT OPTICAL)		
IC704	8-759-605-00	IC	M5F78M07L		
IC705	8-759-604-95	IC	M5F79M07L		
IC706	8-759-231-53	IC	TA7805S		
IC707	8-759-636-55	IC	M5218AFP		
		< JUMPER RESISTOR >			
JR1	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR2	1-216-295-91	METAL GLAZE	0	5%	1/10W
		< IC LINK >			
⚠PS701	1-532-841-21	LINK, IC (1.6A)			
⚠PS702	1-532-841-21	LINK, IC (1.6A)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q703	8-729-141-83	TRANSISTOR 2SB1094-LK			
Q704	8-729-209-15	TRANSISTOR 2SD2012			
Q706	8-729-118-00	TRANSISTOR 2SB1116-L			
Q707	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q708	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q709	8-729-209-15	TRANSISTOR 2SD2012			
Q740	8-729-113-72	TRANSISTOR FN1A4M-M33			
Q741	8-729-113-72	TRANSISTOR FN1A4M-M33			
Q742	8-729-113-72	TRANSISTOR FN1A4M-M33			
Q743	8-729-113-72	TRANSISTOR FN1A4M-M33			
Q744	8-729-113-72	TRANSISTOR FN1A4M-M33			
Q745	8-729-113-72	TRANSISTOR FN1A4M-M33			
Q746	8-729-113-72	TRANSISTOR FN1A4M-M33			
		< RESISTOR >			
R702	1-216-121-00	METAL CHIP	1M	5%	1/10W
R703	1-216-077-00	METAL CHIP	15K	5%	1/10W
R704	1-216-077-00	METAL CHIP	15K	5%	1/10W
R705	1-216-033-00	METAL CHIP	220	5%	1/10W
R706	1-216-033-00	METAL CHIP	220	5%	1/10W
R707	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R708	1-216-074-00	METAL CHIP	11K	5%	1/10W
R709	1-216-033-00	METAL CHIP	220	5%	1/10W
R710	1-216-033-00	METAL CHIP	220	5%	1/10W
R713	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R714	1-216-041-00	METAL CHIP	470	5%	1/10W
R715	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R716	1-216-081-00	METAL CHIP	22K	5%	1/10W
R717	1-216-081-00	METAL CHIP	22K	5%	1/10W
R718	1-216-073-00	METAL CHIP	10K	5%	1/10W
R719	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R720	1-216-081-00	METAL CHIP	22K	5%	1/10W
R721	1-216-081-00	METAL CHIP	22K	5%	1/10W
R723	1-216-085-00	METAL CHIP	33K	5%	1/10W
R724	1-216-085-00	METAL CHIP	33K	5%	1/10W
R733	1-216-085-00	METAL CHIP	33K	5%	1/10W
R735	1-216-085-00	METAL CHIP	33K	5%	1/10W
R736	1-216-085-00	METAL CHIP	33K	5%	1/10W
R737	1-216-085-00	METAL CHIP	33K	5%	1/10W
R738	1-216-085-00	METAL CHIP	33K	5%	1/10W
R739	1-216-085-00	METAL CHIP	33K	5%	1/10W
R740	1-216-085-00	METAL CHIP	33K	5%	1/10W
R742	1-216-037-00	METAL CHIP	330	5%	1/10W
R743	1-216-037-00	METAL CHIP	330	5%	1/10W
R744	1-216-037-00	METAL CHIP	330	5%	1/10W
R745	1-216-037-00	METAL CHIP	330	5%	1/10W
R795	1-216-025-00	METAL CHIP	100	5%	1/10W

Ref.No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
11	1-696-891-11	WIRE (FLAT TYPE) (26 CORE)	
12	1-765-122-11	WIRE (FLAT TYPE) (FFC)(8 CORE)	
13	1-765-123-11	WIRE (FLAT TYPE)(FFC)(12 CORE)	
52	1-696-890-11	WIRE (FLAT TYPE) (19 CORE)	
53	1-765-404-11	WIRE (FLAT TYPE) (7 CORE)	
54	1-575-849-11	WIRE, FLAT TYPE (9 CORE) (H2900)	
54	1-765-404-11	WIRE (FLAT TYPE) (7 CORE) (H3900)	
55	1-690-907-11	WIRE (FLAT TYPE) (17 CORE)	
56	1-696-888-11	WIRE (FLAT TYPE) (9 CORE)	
167	1-638-983-11	MOTOR FLEXIBLE BOARD	
252	1-452-719-11	MAGNET ASSY	
262	1-751-806-11	WIRE (FLAT TYPE) (5 CORE)	
⚠304	8-848-144-11	DEVICE, OPTICAL KSS-240A	
305	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
HP101	A-2003-757-A	BASE ASSY, HEAD (DECK A)	
HRPE101	A-2003-838-F	DECK ASSY, HEAD (H2900:DECK B)	
HRPE101	A-2003-930-A	BASE ASSY, HEAD (H3900:DECK B)	
M101A	X-3363-501-2	MOTOR ASSY (REEL)	
M102A	X-3365-377-1	MOTOR ASSY (CAPSTAN)	
M101B	X-3363-501-2	MOTOR ASSY (REEL)	
M102B	X-3365-377-1	MOTOR ASSY (CAPSTAN)	
M901	X-4917-504-1	MOTOR ASSY (SLED)	
M902	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M903	A-4604-363-A	MOTOR (L) ASSY	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
*	4-966-009-01	INDIVIDIAL CARTON (H3900)	
*	4-966-013-01	CUSHION (FRONT) (H3900:AEP/H2900:EXCEPT G,IT)	
*	4-966-014-01	CUSHION (REAR) (H3900:AEP/H2900:EXCEPT G,IT)	
*	4-966-022-01	INDIVIDIAL CARTON (H2900:AEP,G,IT)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-548-04	SCREW +BVTT 3X8 (S)	
#2	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#4	7-621-775-00	SCREW +B 2.6X3	
#5	7-627-556-08	SCREW +P 2.6X2.8	
#6	7-621-255-15	SCREW +P 2X3	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

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HTC-H2900/H3900

SONY

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
Tourist Model
HTC-H2900
AEP Model
HTC-H3900

CORRECTION-1

Correct your service manual as shown below.

____ (Under line) : indicates corrected portion. (Page 35-36:Schematic Diagram, Page 57:Electrical Parts List)

Page	INCORRECT			CORRECT		
	Ref. No.	Location	Description	Ref. No.	Location	Description
35	Q803	A-7	UN2211-TX	Q803	A-7	UN2113-TX
	Q804	B-7	UN2211-TX	Q804	B-7	UN2113-TX
36	Q505	D-16	UN2211-TX	Q505	D-16	UN2113-TX
	Q506	D-17	UN2211-TX	Q506	D-17	UN2113-TX
	Q509	A-17	UN2211-TX	Q509	A-17	UN2113-TX
	Q514	H-17	UN2211-TX	Q514	H-17	UN2113-TX
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
57	Q505	8-729-421-22	TRANSISTOR UN2211	Q505	8-729-424-18	TRANSISTOR UN2113
	Q506	8-729-421-22	TRANSISTOR UN2211	Q506	8-729-424-18	TRANSISTOR UN2113
	Q509	8-729-421-22	TRANSISTOR UN2211	Q509	8-729-424-18	TRANSISTOR UN2113
	Q514	8-729-421-22	TRANSISTOR UN2211	Q514	8-729-424-18	TRANSISTOR UN2113
	Q803	8-729-421-22	TRANSISTOR UN2211	Q803	8-729-424-18	TRANSISTOR UN2113
	Q804	8-729-421-22	TRANSISTOR UN2211	Q804	8-729-424-18	TRANSISTOR UN2113

(RPC-96022)

9-959-559-91

Sony Corporation
Home A&V Products Company

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SS-H2900

SERVICE MANUAL

E Model
Australian Model
Tourist Model

This set is the speaker system in MHC-E60X.

LEFT CHANNEL

SPECIFICATIONS

System :	3-way-speaker system
Speaker units :	Woofer : 13cm, cone type
	Midrange : 6cm, cone type
	Tweeter : 2cm, dome type
Enclosure type :	Bass reflex
Rated impedance :	6 Ω
Sensitivity :	87dB (1W, 1m)
Effective frequency range :	50-20.000Hz
Dimensions :	Approx. 195 × 390 × 255mm (W/h/d)
Weight :	Approx. 4.2kg per speaker, net

Design and specification are object to change without notice.

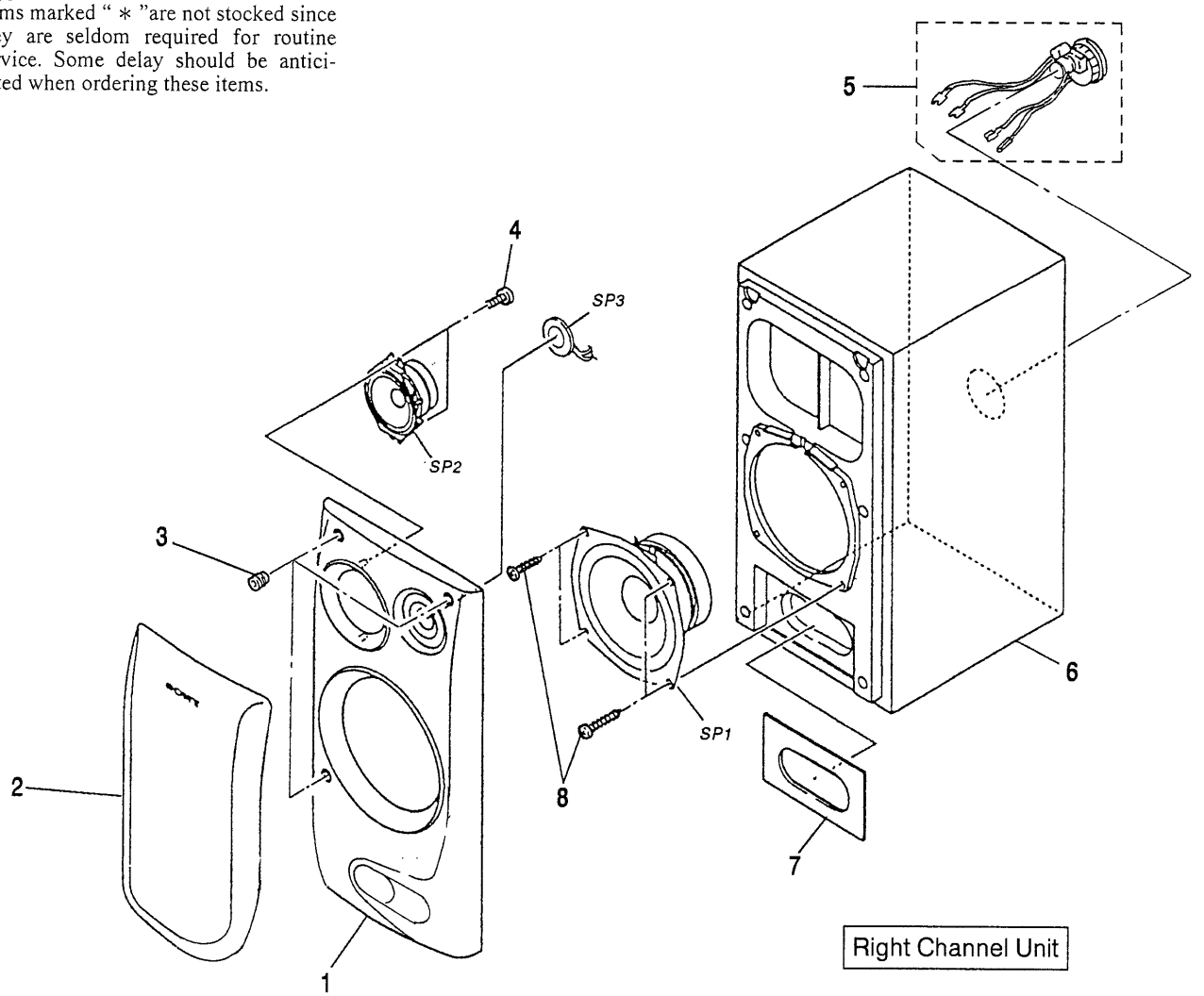
SPEAKER SYSTEM

SONY®

EXPLODED VIEW AND PARTS LIST

NOTE :

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



Ref. No.	Part No.	Description	Remark
1	4-963-618-01	FRONT PANEL(L)	
1	4-963-619-01	FRONT PANEL(R)	
2	X-4944-401-1	GRILLE FRAME(L)ASSY	
2	X-4944-402-1	GRILLE FRAME(R)ASSY	
3	4-951-733-01	CATCHER	
4	3-703-840-01	TAPPING, SCREW	
5	1-589-603-11	PC BOARD	
* 6	A-4353-660-B	SPEAKER, CABINET ASSY	

Ref. No.	Part No.	Description	Remark
7	9-911-840-XX	PACKING	
8	4-874-614-21	TAPPING, SCREW(4)(3.5X14)	
SP1	1-504-491-11	SPEAKER(12 cm CONE)	
SP2	1-504-544-11	SPEAKER(6 cm CONE)	
SP3	1-504-546-11	SPEAKER(2 cm PIEZO)	
		< PACKING MATERIALS >	
*	4-966-435-01	CUSHION	

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